



JUNIOR
CO-OPERATIVE
VARIETY TESTS

Published by
Saskatchewan Co-operative Producers Limited
Head Office, Regina

JUNIOR CO-OPERATIVE VARIETY TESTS

WHEAT, FLAX
and CROP COMPARISON



1949

Published by

SASKATCHEWAN CO-OPERATIVE PRODUCERS LIMITED
March, 1950

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FOREWORD

By the President of
Saskatchewan Co-operative Producers Limited.

This booklet contains the results of variety testing projects undertaken by the Saskatchewan Wheat Pool during 1949. As in past years the major credit for the success of this work is due to the Junior Co-operators who supervised the individual tests. Their tasks were difficult and often required painstaking attention to detail. On behalf of all Pool members I wish to record our sincere appreciation for the contribution these young people have made.

Many of the Junior Co-operators who took part in earlier projects have since made farming their full-time occupation, and some have become leaders in the Wheat Pool organization. Others have turned to different walks of life. We hope they will always recall their variety testing activities as a pleasant experience of former years.

Through their work these Junior Co-operators have provided valuable information to Western farmers—information that has not been available from any other source.

The Saskatchewan Wheat Pool looks back with pride upon these past accomplishments, and looks forward with anticipation to a continued long association with the youth of our province.

J. H. Wesson.

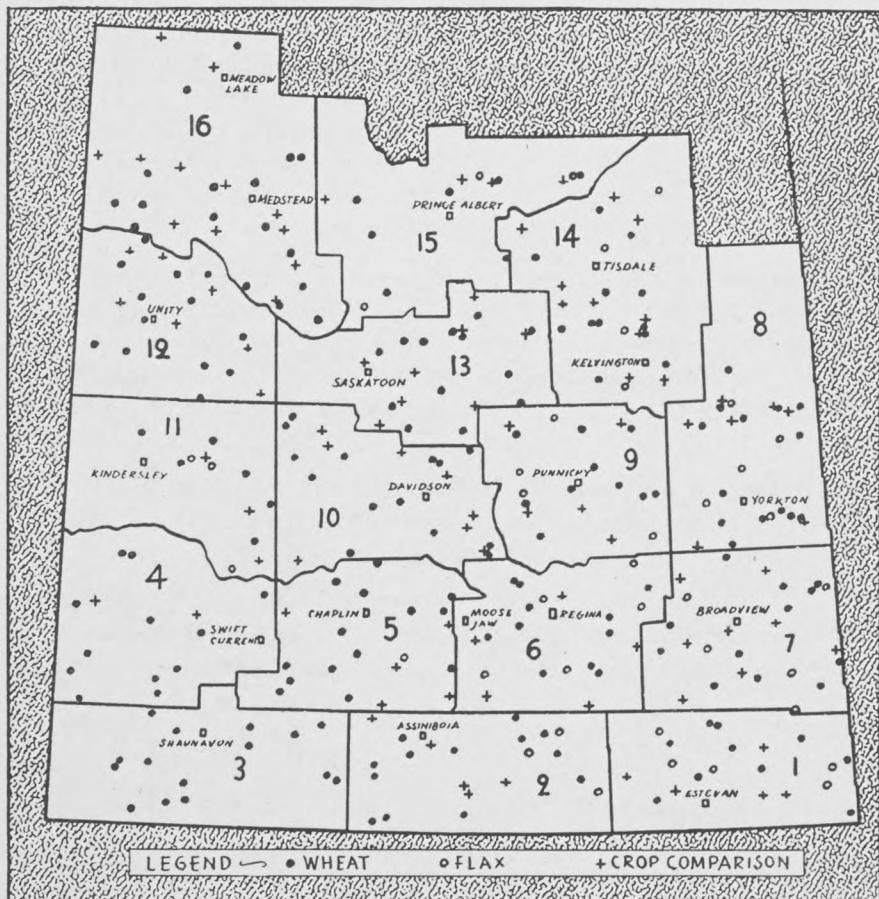
Introduction

DURING the 1949 crop season the Saskatchewan Wheat Pool, with the co-operation of 325 Junior Co-operators on farms in the province, conducted its fifteenth annual variety testing program.

Three separate projects were undertaken, involving Wheat tests, Flax tests and Crop Comparison tests.

Wheat Tests—The wheat project consisted of 193 individual tests and these were distributed throughout the entire province. Four varieties were grown in each test. In the central, western and southern cereal variety zones, the varieties used were Thatcher (the standard of comparison), Apex 2177, CT-609 and Stewart. In the eastern and northern cereal variety zones, Stewart was replaced in the tests by Saunders. Stewart is a durum variety which, because of its sawfly resistance, was included in tests in the area where sawfly damage is usually most severe. Due to characteristic late maturity of durum varieties, however, it was replaced by Saunders in the northern and eastern zones where frost damage is a more serious threat.

MAP SHOWING LOCATION OF TESTS ACCORDING TO WHEAT POOL DISTRICTS

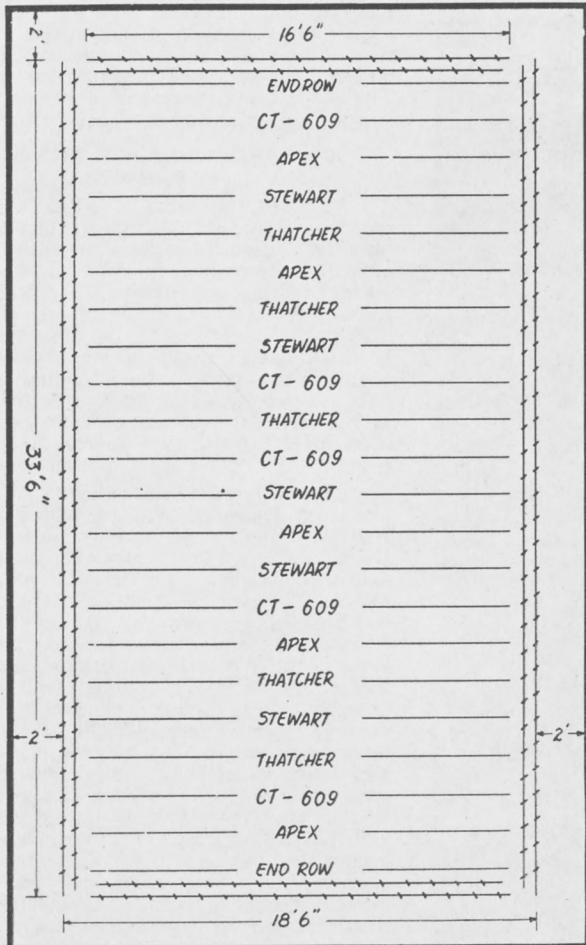


In the search for higher yielding varieties, science has recently produced CT-609. This variety received its first province-wide testing in 1949. A summary of the general characteristics of CT-609 and the other varieties in the project is shown at the beginning of the wheat report on page 9.

Flax Tests—The flax project consisted of 38 tests and included the varieties Royal, Rocket, Dakota, Victory and Sheyenne. A complete report of the location, yields, and other features of the tests, and a description of the varieties is given beginning on page 38.

Crop Comparison Tests—A crop comparison project was conducted in an effort to determine the relationship, on a cash value-per-acre basis, between four of the major crops grown in Saskatchewan. This was a continuation of the project undertaken in 1948 and was similar to the feed yield tests carried out by the organization in 1941 and 1942. During 1949, 94 crop comparison tests were conducted using the varieties Thatcher wheat, Fortune oats, Montcalm barley and Dakota flax. The results of the comparison are summarized in the section beginning on page 46.

PLAN OF WHEAT TEST



The crossed lines represent border rows of winter wheat. A two-foot pathway was left between the winter wheat border and the surrounding field crop. The flax and crop comparison tests were laid out in a similar manner except that 41 rows were sown in the flax projects and 64 rows in the crop comparison tests.



DESCRIPTION OF TESTS

A diagram of the wheat test appears on page 5. Twenty rows were sown, allowing for five replicates of each variety. The rows were $16\frac{1}{2}$ feet in length and were placed 18 inches apart. For protection purposes, an extra buffer row was placed at each end of the test and the entire project was surrounded by a winter wheat border.

The flax tests were sown in a similar manner. Each test consisted of twenty plots of two rows each. The rows, each $16\frac{1}{2}$ feet in length, were placed 1 foot apart. The twenty plots allowed for each of the five varieties to be replicated four times throughout the test. One of the rows in each plot was used for testing purposes while the other served as a protection to the test row. For additional protection the entire test was surrounded by a winter wheat border.

The crop comparison tests consisted of sixteen plots of four rows each. The rows were $16\frac{1}{2}$ feet in length and were sown 1 foot apart. The two centre rows of each plot were harvested for yield and the two outside rows were used for protection and segregation. The entire test consisted of sixty-four rows and was surrounded by a winter wheat border.

ORGANIZATION OF THE TESTING PROGRAM

Much of the value of Wheat Pool projects in past years has resulted from the fact that tests have been distributed throughout the entire grain growing area of the province. In order to maintain this important feature, an attempt was made again in 1949 to place two tests in each of the 166 Wheat Pool sub-districts in Saskatchewan. The distribution achieved is illustrated in the map on page 4. Junior Co-operators to supervise the individual tests were carefully selected by Wheat Pool delegates. It was necessary to secure the services of young people who had a keen interest in this type of work and who could be relied upon to follow their instructions accurately.

The equipment required for each test was supplied from Head Office of the Wheat Pool in Regina. Individual parcels of seed were carefully prepared and were shipped to the supervisors together with full instructions explaining in detail the method of seeding the test. During the growing season, close contact was maintained between each of the 325 Junior Co-operators and the Junior Co-operative Department of the Wheat Pool organization. The co-operators were requested to complete and forward regular progress reports concerning the comparative development of each variety. The information from these reports was summarized and was used as the basis for the results which appear in the booklet. When the grain was ripe, each co-operator carried out harvesting operations according to special instructions which had been supplied to him. Care was taken to ensure that the returns for each row were parcelled separately and were carefully marked in order to prevent errors in identification. The sheaves were dried and turned over to the nearest Pool elevator agent for shipment to Head Office. On arrival at

Top to Bottom: Variety Test supervisors Elaine Podoleski, Kenaston; Marjory Gooding, Central Butte; Walter Lumb, Duff; James Stusek, Amsterdam

Regina, the sheaves were threshed separately and the yields were recorded. A sample of each variety was cleaned, weighed in pounds per measured bushel and graded. The sample was then forwarded to the Chemistry Department of the University of Saskatchewan where protein analyses were carried out.

Finally the yield, bushel weight and grade of each variety were entered on a summary sheet together with the detailed information which the co-operator had supplied in his reports during the growing season.

As has been the case during the past fifteen years, the project was planned and supervised under the guidance of Dr. J. B. Harrington, Professor of Field Husbandry, University of Saskatchewan, Saskatoon. The threshing, summarizing and statistical analysis in connection with the project were carried out at Head Office of the Saskatchewan Wheat Pool under the direction and supervision of I. K. Mumford.

FACTS TO BE REMEMBERED IN READING AND STUDYING RESULTS

The results of tests carried out during a single year should not be considered conclusive in the selection of a variety. A variety which gives a favorable performance in any one season may not do well under conditions which exist the following year. When making a choice, therefore, the farmer is advised to study the results of several years' tests and in this regard the pamphlet entitled, "Varieties of Grain Crops for Saskatchewan, 1950," is recommended. This pamphlet is compiled by the Saskatchewan Cereal Variety Committee on the basis of information derived from tests conducted under the supervision of the University of Saskatchewan, the Dominion Experimental Farms, and the Saskatchewan Wheat Pool. Copies have been supplied to each Pool elevator agent for the use of farmers in his district. Additional copies may be obtained free of charge from the University of Saskatchewan, Saskatoon; the Provincial Department of Agriculture, Regina; or Saskatchewan Co-operative Producers Limited, Regina.

Necessary Difference

The statistical term "Necessary Difference" is used in different parts of this report. The "Necessary Difference" is calculated by applying an approved statistical formula to the yield results of each individual test. The result of the calculation is shown in bushels per acre and it represents the amount by which a variety must outyield another variety in the test in order to be considered significantly superior in yield.

Straw Strength

Straw strength was reported on the basis 10-0. If the plants in a plot were straight and erect, the strength of straw was recorded as 10. If the straw showed signs of weakness a lower figure was used, depending upon the degree of weakness observed.

Results of Individual Tests

The results of individual tests appear in the following tables: Wheat No. 23; Flax, No. 31; Crop Comparison, No. 34. These results are arranged according to Wheat Pool districts (illustrated on page 4), so that a reader who wishes to study the results in a particular area may readily locate the tests in which he is interested. It should be emphasized that the results of a single test give an accurate comparison of the varieties only under the conditions which exist on the farm where the test is located. An examination of the results in these tables will reveal the fact that the varieties do not show similar relationships in all areas of the province. Results may differ widely, even in tests grown relatively close together. This variation may be due to several causes, most important of which are differences in soil type, moisture conditions, and date of seeding.

Grading Remarks

In determining commercial grades, bushel weight is a very important factor. However, there are many other factors which may lower the grade of a sample.

In the individual results, the column headed "Grading Remarks" contains abbreviations which are used to denote any adverse characteristics other than bushel weight, which appear in the sample of grain.

The following abbreviations have been used to indicate the various defects:

BL.—Bleached	F.—Frosted	Pl.—Peeled
B. BL.—Badly Bleached	S.F.—Slightly Frosted	St.—Stained
B. P.—Black Point	G.—Green	Stch.—Starchy
S.B.P.—Some Black Point	S.G.—Slightly Green	S. Stch.—Slightly Starchy
D.—Dark	V.G.—Very Green	V. Stch.—Very Starchy
V.D.—Very Dark	I.—Immature	W.—Weathered
Del.—Discolored	S.I.—Slightly Immature	W.S.—Weather Stained
E.—Ergoty		

ANALYSIS OF DATA

The individual tests were grouped for analysis on the basis of cereal variety zones. These zones, the boundaries of which were laid out by the Saskatchewan Cereal Variety Committee, are described below and illustrated on pages 30 and 31. Each zone represents an area within which the soil is of the same general type and where climatic conditions are normally somewhat similar. It should be stressed, however, that local conditions within a zone sometimes vary considerably from the average of the zone.

Cereal Variety Zones—Prevailing Soil Type and Climatic Conditions

- 1A Brown soils; subject to frequent droughts.
- 1B Brown soils; subject to more frequent droughts than 1A.
- 1C Brown soils; chiefly burn-out types; subject to more frequent droughts than 1A.
- 2A Dark brown soils; subject to occasional droughts; better moisture conditions than 1A.
- 2B Dark brown soils; slightly cooler than 2A.
- 2C Dark brown soils, bench land; cooler, shorter frost-free season and better moisture conditions than 1A.
- 2D Dark brown soils; higher elevation and distinctly shorter frost-free season than 2B.
- 2E Dark brown heavy clay soils; more drought resistance than 2A and 2B.
- 2F Brown and dark brown heavy clay soils; more drought resistance than 1A and adjoining 2B.
- 3A Black soils; better moisture conditions than 2A.
- 3B Deep black and degraded black soils; shorter frost-free period and better moisture conditions than 3A.
- 3C Black soils; better moisture conditions than 2B, and cooler than 3A and 3G.
- 3D Deep black soils; better moisture conditions than 3E.
- 3E Black soils; shorter frost-free season and better moisture conditions than 2D.
- 3F Degraded black and some grey soils; shorter frost-free period than 3D.
- 3G Black soils, medium to light textured, more droughty than 3E.
- 3H Degraded black soils; distinctly short frost-free season.
- 4A Grey and strongly degraded black soils; short frost-free season.
- 4B Grey soils; distinctly short frost free season; better moisture conditions than 3E.

RAINFALL

As the amount of rainfall during the growing season has a greater influence upon the yields than the amount of annual precipitation, the rainfall shown in the following table covers only the months representing the growing period of wheat in Saskatchewan.

**TABLE NO. 1.—AVERAGE MONTHLY PRECIPITATION DURING THE PERIOD
APRIL-AUGUST**

SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	*	April	*	May	*	June	*	July	*	August
1A.....	16	.29	20	1.27	21	1.65	17	2.17	20	1.06
1B.....	4	.31	3	1.29	4	2.04	4	2.28	5	.63
2A.....	3	.06	4	2.97	4	1.67	4	2.54	4	1.05
2B.....	10	.28	11	2.01	13	2.29	12	2.51	14	1.90
2C & 2D.....	4	.69	7	1.76	7	1.41	7	2.11	7	1.69
2E & 2F.....	8	.24	8	1.50	8	1.24	8	2.33	6	1.68
3A.....	3	.15	3	1.94	4	2.76	4	4.76	5	1.47
3B.....	5	.43	5	1.94	6	3.81	6	3.74	6	1.86
3C.....	6	.58	6	2.95	7	2.50	6	3.25	6	1.76
3D & 3F.....	5	.50	8	2.31	7	3.21	8	2.31	8	1.85
3E & 3G.....	5	.57	5	2.13	4	1.88	4	2.07	4	1.54
4A.....	1	.46	1	.21	1	3.03	—	—	—	—
4B.....	4	.35	4	1.07	4	3.00	3	2.60	3	2.12

*—Number of stations reporting.

Note: The precipitation records from which the above table was compiled were supplied by the Statistics Branch, Provincial Department of Agriculture.



Jack Bouma of North Battleford and his variety test.

WHEAT TESTS

The wheat project consisted of 193 individual tests. These were distributed throughout the entire grain growing area of the Province and it is felt that the results of the project represent accurately the ability of each variety on the various types of soil, and under the climatic conditions which existed during the growing season. Four of the new, promising varieties were selected for testing, using Thatcher as the standard for comparison. Not all of the varieties were tested in each area. Thatcher, Apex, and CT-609 were used in all zones but each of the other varieties was used in the general area where it could reasonably be expected to give best results when grown commercially. The durum variety, Stewart, was the fourth variety used in tests in the open plains area* (Cereal Variety Zones 1A to 2F, inclusive). Saunders was the fourth variety included in tests in the black and grey soils of the park belt and wooded districts. (Cereal Variety Zones 3A to 4B inclusive).

DESCRIPTION OF VARIETIES

Thatcher was produced from a cross made in 1921 at the Minnesota Agricultural Experiment Station, St. Paul, between (Marquis X Iumillo) X (Marquis X Kanred). From one of the original crosses (Marquis X Iumillo), a bread wheat type was obtained with a considerable degree of resistance to stem rust under field conditions. From the Marquis X Kanred cross, a spring wheat was selected of good milling and baking quality that was immune to several forms of black stem rust and had high yielding ability. Thatcher originated from a cross between these two. Thatcher is resistant to most forms of black stem rust and to loose smut, but is susceptible to leaf rust and covered smut.

Apex was developed at the University of Saskatchewan from the composite cross (H-44-24 X Double Cross) X Marquis. Double Cross is a sister of Thatcher. Apex is highly resistant to stem rust, moderately resistant to covered smut and loose smut, but susceptible to leaf rust. A new strain, Sask. 2177, which resulted from back crossing Apex on to Marquis, was used in these tests. Compared to the original variety, Apex 2177 is higher in yield, stronger strawed, higher in bushel weight and slightly later.

CT-609 is a red-seeded bread wheat variety developed by the United States Department of Agriculture as the result of a cross between Mida and Cadet. In preliminary tests CT-609 has equalled Thatcher in resistance to stem rust, loose smut and rootrot. It is three or four days later in maturity, equally strong strawed and two or three inches taller than Thatcher on the average. CT-609 has yielded well in tests so far. **At the time of preparing this report CT-609 had no grade standing in Canada. For comparison purposes in these tests it was considered equal in grading ability to the other varieties. In overseas milling and baking tests carried out recently, however, CT-609 has failed to equal Marquis in quality. On this basis, the variety was turned down for licensing at the recent annual meeting of the associate committees on grain research, plant breeding and diseases. Thus, CT-609 is not eligible for production and sale in Canada.**

* See Cereal Variety Zone Map, page 31.

Stewart was developed at the North Dakota Agricultural College as the result of backcrossing Mindum X Vernal with Mindum. It is resistant to stem and leaf rust but is moderately susceptible to rootrot and is susceptible to covered smut. Stewart is moderately resistant to sawfly infestation. It is considered equal in quality to Mindum and is eligible to grade 1 C.W. Amber Durum.

Saunders is an early maturing variety which originated from a cross made at the Central Experimental Farm, Ottawa, in 1938, between an early ripening hybrid (Hope X Reward) and Thatcher. Saunders is resistant to stem rust and loose smut. It is moderately resistant to rootrot but susceptible to leaf rust and moderately susceptible to covered smut. Saunders has been licensed and is eligible for the highest grades.

TABLE NO. 2.—AVERAGE YIELDS IN BUSHELS PER ACRE
SUMMARIZED BY CEREAL VARIETY ZONES OR GROUPED ZONES

Cereal Variety Zone	No. of Satisfactory Tests	Thatcher	Apex	CT-609	Stewart	Saunders	Necessary Difference (B) in Bushels
1A.....	18	9.9	9.1	9.3	7.7	—	1.0
1B.....	3	6.1	5.5	6.3	4.1	—	1.9
2A.....	3	13.3	12.1	11.6	13.0	—	(A)
2B.....	14	16.5	15.3	16.5	14.4	—	1.5
2C & 2D.....	7	15.6	15.9	16.2	16.1	—	(A)
2E & 2F.....	8	13.3	13.7	14.1	16.6	—	1.8
3A.....	10	16.5	16.9	18.1	—	14.2	1.3
3B.....	16	25.4	26.3	29.9	—	21.1	1.2
3C.....	17	21.0	21.2	23.8	—	18.2	1.0
3D & 3F.....	4	29.1	28.7	31.8	—	25.8	(A)
3E & 3G.....	10	22.7	21.7	21.5	—	18.0	1.9
4A.....	6	26.6	29.0	33.2	—	24.1	2.1
3H & 4B.....	6	34.6	34.2	40.7	—	29.5	2.4

A—No significant grain yield difference between varieties.

B—Necessary difference is the amount by which a variety must outyield another variety in the zone in order to be considered significantly superior in yield.

Note: There were no satisfactory tests in Zone 1C.

Table No. 2. A general average of yields in Zones 1A to 2F, where Stewart durum was the fourth variety grown in the tests, shows **Thatcher** to be the highest yielder, followed by **CT-609**, **Apex**, and **Stewart** in that order. No major differences were observed in the zone yields of the different bread wheat varieties. Stewart durum appeared variable in yield ranking first in one zone, second in two and fourth in three. Poorest results with this variety occurred in zones where drought conditions were most severe. Stewart gave its best comparative performance in Zones 2E and 2F where field crop yields were slightly higher than the average for the south-western area of the province. On the whole, Stewart suffered more severely from grasshopper attacks than the bread wheat varieties.

A general average of the yields in Zones 3A to 4B, where Saunders was the fourth variety used in the tests, indicates that **CT-609** outyielded all other varieties. It was followed by **Apex**, **Thatcher**, and **Saunders** in that order. On a zone basis, CT-609 ranked first in six of the seven areas. Only slight differences appeared between the yields of Apex and Thatcher, these being non-significant in every zone except 4A. In that area Apex outyielded Thatcher by a difference which was significant. Saunders was consistently low in yield. It proved inferior to all other varieties in every zone.

TABLE NO. 3.—AVERAGE NUMBER OF DAYS FROM SOWING TO RIPENING
SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Thatcher	Apex	CT-609	Stewart	Saunders
1A.....	94.6	95.8	96.1	97.8	—
1B.....	—	—	—	—	—
2A.....	102.3	104.3	105.0	107.0	—
2B.....	108.3	109.6	109.8	111.0	—
2C & 2D.....	109.4	110.4	111.0	115.8	—
2E & 2F.....	106.8	108.4	109.8	112.8	—
3A.....	99.1	101.4	103.2	—	98.9
3B.....	104.7	106.0	107.9	—	102.9
3C.....	104.4	106.0	106.6	—	105.0
3D & 3F.....	109.0	109.0	112.0	—	109.0
3E & 3G.....	104.7	106.9	108.1	—	104.7
4A.....	102.5	104.0	105.5	—	100.7
3H & 4B.....	108.3	109.3	109.7	—	106.7

Table No. 3. Zones 1A to 2F. **Thatcher** ripened first in every zone followed by **Apex**, **CT-609**, and **Stewart** in that order.

Zones 3A to 4B. Generally **Saunders** ripened earlier than the other varieties, followed by **Thatcher**, **Apex**, and **CT-609** in that order. In Zone 3C, however, **Thatcher** was first to mature, and in Zones 3D and 3F, and 3E and 3G, it proved equal to **Saunders** in earliness.

TABLE NO. 4.—AVERAGE HEIGHT OF PLANTS IN INCHES
SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Thatcher	Apex	CT-609	Stewart	Saunders
1A.....	21.7	21.3	21.7	25.4	—
1B.....	—	—	—	—	—
2A.....	23.3	25.7	26.3	31.0	—
2B.....	24.2	24.7	25.4	29.4	—
2C & 2D.....	23.0	23.2	24.2	28.4	—
2E & 2F.....	23.8	24.4	25.6	30.8	—
3A.....	32.0	32.7	34.4	—	30.0
3B.....	34.1	35.3	39.1	—	32.0
3C.....	29.7	30.2	32.5	—	28.5
3D & 3F.....	41.5	41.5	43.0	—	38.0
3E & 3G.....	26.1	28.4	29.0	—	25.4
4A.....	37.8	39.8	42.0	—	35.6
3H & 4B.....	30.8	31.8	33.3	—	30.3

Table No. 4. Zones 1A to 2F. **Stewart** was taller than the bread wheat varieties in every zone. **CT-609** placed second. **Apex** ranked third in height in all zones, with the exception of 1A where it was exceeded by **Thatcher**. In all other areas **Thatcher** was the shortest variety.

Zones 3A to 4B. **CT-609** was tallest in all zones throughout this region, followed by **Apex**, **Thatcher** and **Saunders** in that order.

TABLE NO. 5.—AVERAGE STRAW STRENGTH OF PLANTS ON THE BASIS 10 (STRONG)
0 (WEAK) SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Thatcher	Apex	CT-609	Stewart	Saunders
1A.....	7.8	8.0	8.0	8.6	—
1B.....	—	—	—	—	—
2A.....	9.4	8.4	9.4	9.0	—
2B.....	8.6	8.9	8.5	8.8	—
2C & 2D.....	9.3	9.2	9.2	7.5	—
2E & 2F.....	8.2	8.0	8.4	9.5	—
3A.....	9.0	9.3	9.0	—	8.7
3B.....	9.1	8.9	8.9	—	8.9
3C.....	9.2	9.2	9.2	—	8.8
3D & 3F.....	7.8	8.0	8.6	—	7.8
3E & 3G.....	8.8	8.8	8.1	—	8.8
4A.....	8.4	7.7	8.4	—	8.2
3H & 4B.....	8.1	8.5	7.8	—	8.4

Table No. 5. Zones 1A to 2F. Only slight variations occurred between the varieties in straw strength but an average of the area shows **Stewart** to be superior, followed by **CT-609**, **Apex** and **Thatcher**.

Zones 3A to 4B. Variation was slight throughout this region but an average of all tests places **Thatcher** first, **Apex** second, **CT-609** third, and **Saunders** fourth.

TABLE NO. 6.—AVERAGE WEIGHT PER MEASURED BUSHEL
SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Thatcher	Apex	CT-609	Stewart	Saunders
1A.....	59.7	60.2	60.2	62.1	—
1B.....	58.0	58.5	59.5	61.0	—
2A.....	61.0	61.0	60.3	64.0	—
2B.....	59.9	60.9	61.2	63.5	—
2C & 2D.....	62.4	63.4	63.0	64.3	—
2E & 2F.....	59.9	61.4	60.5	64.0	—
3A.....	60.1	60.8	60.4	—	58.8
3B.....	60.1	61.7	61.3	—	59.4
3C.....	60.7	62.2	61.8	—	59.9
3D & 3F.....	60.7	62.2	62.2	—	59.7
3E & 3G.....	61.8	62.8	62.4	—	60.5
4A.....	61.0	63.0	62.7	—	60.0
3H & 4B.....	62.7	63.7	62.7	—	62.2

Table No. 6. Zones 1A to 2F. **Stewart** outweighed the bread wheat varieties by a considerable margin in every zone. **Apex** placed second, followed closely by **CT-609**. **Thatcher** ranked fourth in every zone except 2A where it tied with **Apex** and outweighed **CT-609**.

Zones 3A to 4B. **Apex** was superior in every zone except 3D and 3F where it was tied for first place by **CT-609**. Generally, **CT-609** ranked second, with **Thatcher** third. **Saunders** was outweighed consistently by all other varieties.

TABLE NO. 7.—COMMERCIAL GRADES IN PERCENTAGE
(ZONES 1A TO 2F)

Variety	1°	2°	3°	4°	4 Sp.	No. 5	No. 6
Thatcher	39.7	42.8	9.5	4.8	3.2	—	—
Apex	60.3	25.4	7.9	4.8	1.6	—	—
CT-609	44.4	38.1	12.7	1.6	1.6	1.6	—
	1 C.W.	2 C.W.	3 C.W.	4 C.W.	5 C.W.		
Stewart	44.4	36.5	17.5	—	1.6		

TABLE NO. 8.—COMMERCIAL GRADES IN PERCENTAGE
(ZONES 3A TO 4B)

Variety	1°	2°	3°	4°	4 Sp.	No. 5	5 Sp.
Thatcher	29.4	41.0	24.4	2.6	2.6	—	—
Apex	44.9	34.6	11.5	7.7	—	1.3	—
CT-609	32.0	30.8	21.8	12.8	—	2.6	—
Saunders	20.5	44.9	25.6	5.2	3.8	—	—

The average commercial grades have been consolidated into two tables which show a comparison of the grading ability of the varieties in the two main zone groups.

Table No. 7. Zones 1A to 2F. **Apex** was superior in grading ability throughout the region, with 60 percent of the samples grading in the 1 Northern class. **Thatcher** and **CT-609** were approximately equal in grading ability. Approximately 45 percent of the **Stewart** samples graded 1 C.W.

Table No. 8. Zones 3A to 4B. **Apex** was superior in commercial grades. Only slight variations appeared between the grades of **Thatcher**, **CT-609**, and **Saunders**. More than 70 percent of the Thatcher samples graded 1 or 2 Northern, compared to 62.8 percent for CT-609 and 65.4 percent for Saunders.

TABLE NO. 9.—PROTEIN CONTENT IN PERCENTAGE
SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Thatcher	Apex	CT-609	Stewart	Saunders
1A	15.9	15.9	15.0	15.8	—
1B	16.7	17.1	16.2	16.7	—
2A	14.5	14.3	13.5	13.8	—
2B	15.9	16.0	15.2	15.2	—
2C & 2D	15.1	15.2	14.0	14.6	—
2E & 2F	15.0	15.2	14.5	14.9	—
3A	14.0	14.2	13.2	—	13.9
3B	14.2	14.6	13.7	—	14.1
3C	14.0	15.1	14.1	—	14.5
3D & 3F	13.9	14.1	13.3	—	13.6
3E & 3G	15.5	15.4	14.6	—	15.0
4A	13.8	14.3	12.7	—	13.7
3H & 4B	13.5	14.0	12.5	—	13.4

Table No. 9. Protein analyses were carried out at the Chemistry Department, University of Saskatchewan. **Apex** was high in protein content on an average basis, exceeding the other varieties in ten zones. It placed second to Thatcher in two zones and tied with that variety for first place in a third. **Thatcher** generally ranked second, although in Zone 3C it proved inferior to all other varieties. **Stewart** placed third in protein content on an average basis in Zones 1A to 2F. In Zones 3A to 4B, Stewart was replaced by **Saunders** which also ranked third. With the exception of two zones, **CT-609** consistently had lower protein content than the other varieties.



Left: Kenneth Smith, Douglaston; Right: Peter Marshal, Ituna

SUMMARIZATION ACCORDING TO CEREAL VARIETY ZONES

In comparing the performances of the varieties in a particular district, it is advisable to study, not only the results of the individual test in that district but also the average results of all tests conducted under similar conditions of soil and climate. Accordingly, the following section of the booklet has been prepared showing the average results of all tests within each cereal variety zone. The cereal variety zones are illustrated on page 31 and described in the "Analysis of Data" on page 8. Each zone represents an area within which the soil and climate is generally similar and throughout which, under normal growing conditions, a variety may generally be expected to give similar results. It should be kept in mind, however, that some variation is likely to occur in growing conditions at different points in a zone during every season. For that reason the average results of tests for a zone may not be representative of the entire area. In addition, the performance of a variety may show considerable variation under the differing growing conditions that will exist within a zone from year to year. Therefore, the results of one year's tests with a variety should not, under any circumstances, be considered a sound basis on which to judge the ability of the variety.

By turning to the Cereal Variety Zone map on page 31, the reader may determine the designation of the zone in which he is interested. Then, by locating the summary for that zone in the following pages, he may ascertain the average results of all tests carried out. In some cases, due to an insufficient number of tests in a zone, the tests from two similar zones have been grouped together for analysis.

In studying the data under the heading of "General Yield Performance During Past Years," the reader will find it helpful to know the number of varieties tested in each year. This information is given below and the reader may refer to it when studying varietal performances for a zone. Five varieties were tested in each zone in 1940, three varieties in 1941, six varieties in 1942, four varieties in 1943, six varieties in 1944, none in 1945, and four varieties were tested in each of the years 1946, 1947, 1948 and 1949.

CEREAL VARIETY ZONE 1A

TABLE NO. 10.—SUMMARIZED RESULTS FOR ZONE 1A

(18 satisfactory tests)

	Thatcher	Apex	CT-609	Stewart
Yield in bushels per acre.....	9.9	9.1	9.3	7.7
Days from seeding to ripening.....	94.6	95.8	96.1	97.8
Height of plants in inches.....	21.7	21.3	21.7	25.4
Straw strength.....	7.8	8.0	8.0	8.6
Bushel weight in pounds.....	59.7	60.2	60.2	62.1
Commercial grades in percentage:				
1 Nor. & 1 C.W.....	40.0	50.0	40.0	30.0
2 Nor. & 2 C.W.....	40.0	30.0	30.0	50.0
3 Nor. & 3 C.W.....	5.0	10.0	15.0	20.0
4 Nor.....	5.0	5.0	5.0	—
4 Sp.....	10.0	5.0	5.0	—
No. 5.....	—	—	5.0	—

Necessary difference—1.0 bushel.

Table No. 10. Damage by drought and grasshoppers resulted in the complete failure of a large number of tests in Zone 1A. Consequently, some areas in the zone have little or no representation in the varietal results shown by the table. While all varieties sustained some loss due to grasshoppers, Stewart was attacked more severely than any of the bread wheats. This damage was responsible, in part at least, for the comparatively poor out-turn of **Stewart** which was outyielded significantly by all of the bread wheat varieties. Only slight yield differences occurred between the bread wheats and these were not of a significant nature. **Thatcher** ripened earlier than **Apex** and **CT-609** but showed poorer bushel weight. In other respects, these three varieties produced similar results. Stewart was low in yield and late in ripening but excelled in height, straw strength and bushel weight.

General Yield Performance During Past Years

Thatcher has been used in Wheat Pool tests during nine of the past ten years, outyielding all other varieties on five occasions, and placing second three times. In 1947 it ranked fourth. Thatcher is highly recommended for use in Zone 1A. **CT-609** gave a favorable performance during 1949 but further tests are required before any definite recommendations can be made. **Apex** has given only an average performance and is not recommended for this area. **Stewart** has been tested in each of the past three years, yielding first in 1948, second in 1947 and last in 1949.

CEREAL VARIETY ZONE 1B

TABLE NO. 11.—SUMMARIZED RESULTS FOR ZONE 1B

(3 satisfactory tests)

	Thatcher	Apex	CT-609	Stewart
Yield in bushels per acre.....	6.1	5.5	6.3	4.1
Days from seeding to ripening.....	—	—	—	—
Height of plants in inches.....	—	—	—	—
Straw strength.....	—	—	—	—
Bushel weight in pounds.....	58.0	58.5	59.5	61.0
Commercial grades in percentage:				
1 Nor. & 1 C.W.....	33.4	66.7	33.3	—
2 Nor. & 2 C.W.....	—	—	66.7	66.7
3 Nor. & 3 C.W.....	33.3	—	—	33.3
4 Nor.....	33.3	33.3	—	—

Necessary difference—1.9 bushels.

Table No. 11. Only three tests proved satisfactory in this zone and details of earliness, height and straw strength were not available. **CT-609** was high in yield but this was significant only in the case of Stewart. It outweighed Thatcher and Apex and graded well. **Thatcher** yielded comparatively well but was low in bushel weight. **Apex** placed third in yield and bushel weight but was superior to the other bread wheat varieties in grading ability. **Stewart** was low in yield but excelled in weight per measured bushel.

General Yield Performance During Past Years

CT-609 was used in Wheat Pool tests for the first time in 1949. **Thatcher** has been tested during eight of the past ten years, yielding first twice, second five times, and third in one year. It is officially recommended for use in this zone. **Apex**, during a seven year period, yielded second in 1941, third in 1940, 1943, 1946 and 1949, fourth in 1944, and fifth in 1942. It is not recommended for use in Zone 1B. **Stewart** was tested in the zone in 1947 and 1949, and was outyielded by all other varieties on both occasions.

CEREAL VARIETY ZONE 2A

TABLE NO. 12.—SUMMARIZED RESULTS FOR ZONE 2A

(3 satisfactory tests)

	Thatcher	Apex	CT-609	Stewart
Yield in bushels per acre.....	13.3	12.1	11.6	13.0
Days from seeding to ripening.....	102.3	104.3	105.0	107.0
Height of plants in inches.....	23.3	25.7	26.3	31.0
Straw strength.....	9.4	8.4	9.4	9.0
Bushel weight in pounds.....	61.0	61.0	60.3	64.0
Commercial grades in percentage:				
1 Nor. & 1 C.W.....	50.0	75.0	50.0	50.0
2 Nor. & 2 C.W.....	50.0	25.0	50.0	25.0
3 Nor. & 3 C.W.....	—	—	—	—
4 Nor. & 4 C.W.....	—	—	—	—
No. 5 & 5 C.W.....	—	—	—	25.0

No significant grain yield difference between varieties.

Table No. 12. Only three satisfactory tests were conducted in Zone 2A. **Thatcher** produced the highest yield but in no case was its superiority of a significant nature. Thatcher ripened earlier than the other varieties, had strong straw, good bushel weight and graded well. It was somewhat shorter than any of the other varieties. **Stewart** outweighed the bread wheats and produced long straw. It was, once again, somewhat late in ripening. **Apex** excelled in grading ability and equalled Thatcher in bushel weight. It had relatively weak straw. **CT-609** ripened later and was inferior in bushel weight to the other bread wheat varieties. It compared favorably in straw strength and height.

General Yield Performance During Past Years

The suitability of **Thatcher** for use in this zone is demonstrated by the fact that in nine years of testing it has placed first five times, and second three times. In one year it ranked third. **Stewart** is also recommended for use in Zone 2A, having outyielded all other varieties in 1947 and 1948, and placed second in 1949. **Apex** has generally yielded third or fourth and is not recommended for this area. **CT-609** was tested for the first time in 1949.

CEREAL VARIETY ZONE 2B

TABLE NO. 13.—SUMMARIZED RESULTS FOR ZONE 2B

(14 satisfactory tests)

	Thatcher	Apex	CT-609	Stewart
Yield in bushels per acre.....	16.5	15.3	16.5	14.4
Days from seeding to ripening.....	108.3	109.6	109.8	111.0
Height of plants in inches.....	24.2	24.7	25.4	29.4
Straw strength.....	8.6	8.9	8.5	8.8
Bushel weight in pounds.....	59.9	60.9	61.2	63.5
Commercial grades in percentage:				
1 Nor. & 1 C.W.....	20.0	50.0	45.0	45.0
2 Nor. & 2 C.W.....	60.0	35.0	40.0	35.0
3 Nor. & 3 C.W.....	20.0	10.0	15.0	20.0
4 Nor. & 4 C.W.....	—	5.0	—	—

Necessary difference—1.5 bushels.

Table No. 13. **Thatcher** and **CT-609** were equal in yield. Thatcher ripened early but was inferior in bushel weight, grades and height. **CT-609** exceeded the other bread varieties in bushel weight and height but matured later than Thatcher. **Apex** ranked third in yield. **Stewart** was low in yield and late in maturing, but excelled in bushel weight and height.

General Yield Performance During Past Years

Thatcher has been tested during nine of the past ten years. It outyielded all other varieties five times and tied for first place once. In the three remaining years it placed second. Thatcher is officially recommended for use in this zone. **CT-609** was used in Wheat Pool tests for the first time in 1949. **Apex** has given only average results in tests in Zone 2B. **Stewart** has been tested in each of the past three years. In 1947, throughout the southern section of the zone where moisture conditions were reasonably good, Stewart outyielded the bread wheat varieties and ranked second only to Pelissier durum. In the northern section, Stewart produced relatively poor results. In 1948, Stewart ranked third in yield over the entire zone and in 1949 it placed fourth. It is recommended as the best durum variety for use in the area.

CEREAL VARIETY ZONE GROUP 2C & 2D

TABLE NO. 14.—SUMMARIZED RESULTS FOR ZONES 2C & 2D

(7 satisfactory tests)

	Thatcher	Apex	CT-609	Stewart
Yield in bushels per acre.....	15.6	15.9	16.2	16.1
Days from seeding to ripening.....	109.4	110.4	111.0	115.8
Height of plants in inches.....	23.0	23.2	24.2	28.4
Straw strength.....	9.3	9.2	9.2	7.5
Bushel weight in pounds.....	62.4	63.4	63.0	64.3
Commercial grades in percentage:				
1 Nor. & 1 C.W.....	87.5	87.5	37.5	75.0
2 Nor. & 2 C.W.....	12.5	12.5	50.0	12.5
3 Nor. & 3 C.W.....	—	—	12.5	12.5

No significant grain yield difference between varieties.

Table No. 14. Yield differences in this area were of a minor nature and were not significant. **Stewart** exceeded the bread wheat varieties in bushel weight and height but had weak straw and ripened late. Stewart graded well. **CT-609** was taller than Thatcher and Apex but ripened later. All three bread wheat varieties produced strong straw and had good bushel weight. **Apex** excelled in the latter characteristic but was equalled by Thatcher in commercial grading ability. **Thatcher** ripened early and gave a generally satisfactory performance.

General Yield Performance During Past Years

CT-609 was tested for the first time during 1949. **Stewart**, over a three year period, was outyielded by all other varieties in 1947 and placed second in 1949 when yield differences were not significant. In 1948, when Zones 2C and 2D were analyzed separately, Stewart placed fourth and last in Zone 2C, and second in Zone 2D. It is not recommended for use in these zones. **Apex** has been used in tests during eight years, and with the exception of 1948 when it outyielded the other varieties by a narrow margin in Zone 2C, it has never shown general superiority. It ranked second twice, third twice and fourth on three occasions. Apex is not recommended for use in this area. **Thatcher** was outyielded by all other varieties during the past year but the yield differences were not significant. In each of the remaining nine years of tests, Thatcher has placed first or second. It is highly recommended for use in these zones.

CEREAL VARIETY ZONE GROUP 2E & 2F
TABLE NO. 15.—SUMMARIZED RESULTS FOR ZONES 2E & 2F
(8 satisfactory tests)

	Thatcher	Apex	CT-609	Stewart
Yield in bushels per acre.....	13.3	13.7	14.1	16.6
Days from seeding to ripening.....	106.8	108.4	109.8	112.8
Height of plants in inches.....	23.8	24.4	25.6	30.8
Straw strength.....	8.2	8.0	8.4	9.5
Bushel weight in pounds.....	59.9	61.4	60.5	64.0
Commercial grades in percentage: 1 Nor. & 1 C.W.....	37.5	75.0	62.5	62.5
2 Nor. & 2 C.W.....	50.0	12.5	25.0	25.0
3 Nor. & 3 C.W.....	—	12.5	12.5	12.5
4 Nor. & 4 C.W.....	12.5	—	—	—

Necessary difference—1.8 bushels.

Table No. 15. In these zones where crop conditions were somewhat better than the average for the central and southern area, **Stewart** gave an excellent performance, outyielding all other varieties by a significant margin. It ranked first in height, straw strength and bushel weight but was somewhat late in ripening. **CT-609** was second in yielding ability but failed to exceed Thatcher and Apex significantly. It had tall, relatively strong straw and produced good bushel weight but was later than the other bread wheat varieties. **Apex** was third in yield. It was superior to Thatcher and CT-609 in bushel weight and grades but had slightly weaker straw. **Thatcher** ranked fourth in yield, height and bushel weight, but ripened early.

General Yield Performance During Past Years

Stewart has been used in Wheat Pool tests during the past three years. During 1948 and 1949 tests in 2E and 2F were grouped together for analysis and in each of these years Stewart outyielded all other varieties. In 1947, when the zones were analyzed on a separate basis, Stewart was high in yield in Zone 2E, but ranked third in Zone 2F. It is officially recommended for use in Zone 2E. **CT-609** was tested for the first time in 1949. **Apex** placed third in yield in 1946, fourth in 1948 and third in 1949. Thatcher, although fourth in yield in 1949, has given an excellent performance in the past, usually outyielding the other bread wheat varieties. It is officially recommended for use in these zones.

CEREAL VARIETY ZONE 3A

TABLE NO. 16.—SUMMARIZED RESULTS FOR ZONE 3A
(10 satisfactory tests)

	Thatcher	Apex	CT-609	Saunders
Yield in bushels per acre.....	16.5	16.9	18.1	14.2
Days from seeding to ripening.....	99.1	101.4	103.2	98.9
Height of plants in inches.....	32.0	32.7	34.4	30.0
Straw strength.....	9.0	9.3	9.0	8.7
Bushel weight in pounds.....	60.1	60.8	60.4	58.8
Commercial grades in percentage: 1 Nor.	33.3	33.3	25.0	16.7
2 Nor.	25.0	41.7	25.0	33.3
3 Nor.	33.3	8.3	25.0	33.3
4 Nor.	8.4	16.7	25.0	8.3
4 Sp.	—	—	—	8.4

Necessary difference—1.3 bushels.

Table No. 16. **CT-609** was high in yield, exceeding Thatcher and Saunders by differences greater than the necessary difference for the zone. It was taller than the other varieties, produced good bushel weight and graded well. It proved comparatively late in ripening, however. **Apex** placed second in yield and height, and held a slight margin over the other varieties in straw strength and bushel weight. **Thatcher** practically equalled Apex in yield and ripened early. It proved satisfactory in other characteristics. **Saunders** matured early but proved inferior in other characteristics.

General Yield Performance During Past Years

CT-609, a new variety tested for the first time, gave an excellent performance during the past year. Until additional experimental data are available on this variety, however, no definite recommendations can be made. **Apex** has been tested during eight of the past nine years. Prior to 1946, this variety was consistently inferior in yield to Thatcher. Since that time, however, a new strain of Apex (Sask. 2177) has been used and yield results have, in most cases, been approximately equal to those of Thatcher. During the eight-year period Apex placed second in yield in 1948 and 1949, third in 1941, 1943 and 1946, fourth in 1940 and 1942, and sixth in 1944. **Thatcher**,

in nine years of tests, has given an excellent performance, yielding first four times, second four times, and third by a narrow margin in 1949. It is officially recommended for use in Zone 3A. **Saunders** has been tested in each of the past three years, yielding fourth and last on each occasion.

CEREAL VARIETY ZONE 3B
TABLE NO. 17.—SUMMARIZED RESULTS FOR ZONE 3B
(16 satisfactory tests)

	Thatcher	Apex	CT-609	Saunders
Yield in bushels per acre.....	25.4	26.3	29.9	21.1
Days from seeding to ripening.....	104.7	106.0	107.9	102.9
Height of plants in inches.....	34.1	35.3	39.1	32.0
Straw strength.....	9.1	8.9	8.9	8.9
Bushel weight in pounds.....	60.1	61.7	61.3	59.4
Commercial grades in percentage:				
1 Nor.....	22.2	55.5	38.9	22.2
2 Nor.....	44.4	22.2	38.9	44.4
3 Nor.....	22.2	11.1	5.5	22.2
4 Nor.....	—	11.2	16.7	—
4 Sp.....	11.2	—	—	11.2

Necessary difference—1.2 bushels.

Table No. 17. **CT-609** ripened late but otherwise gave a very satisfactory performance. It outyielded all other varieties significantly, excelled in height, and placed second by a narrow margin in bushel weight. **Apex** was second in yield, exceeding **Saunders** by a difference which was significant. It outweighed the other varieties in pounds per measured bushel and graded well. In other characteristics, **Apex** proved satisfactory, although it was somewhat later than **Saunders** and **Thatcher** in ripening. **Thatcher** ranked third in yield but the difference between this variety and **Apex** was not significant. It had strong straw and ripened comparatively early. **Saunders** was again outyielded significantly by all other varieties. It was inferior in bushel weight and height but ripened early.

General Yield Performance During Past Years

CT-609 showed marked superiority in yield during 1949 and may prove useful in future for this area. It should be stressed, however, that further tests must be carried out before any recommendation can be made concerning this variety. **Apex** and **Thatcher** have given similar yield results in this zone in recent years but the advantage in earliness and straw strength held by the latter variety are of importance in the choice of a variety. Over an eight-year period, **Apex** has yielded second four times, third once, fourth twice, and sixth in one year. **Thatcher**, in nine years of tests, has outyielded all other varieties six times, placed second twice, and third in 1949. With this outstanding record, **Thatcher** remains one of the recommended varieties in Zone 3B. While the early maturity of **Saunders** should be considered, it is doubtful if this advantage is sufficient to offset the inferior yield and bushel weight of the variety.

CEREAL VARIETY ZONE 3C
TABLE NO. 18.—SUMMARIZED RESULTS FOR ZONE 3C
(17 satisfactory tests)

	Thatcher	Apex	CT-609	Saunders
Yield in bushels per acre.....	21.0	21.2	23.8	18.2
Days from seeding to ripening.....	104.4	106.0	106.6	105.0
Height of plants in inches	29.7	30.2	32.5	28.5
Straw strength.....	9.2	9.2	9.2	8.8
Bushel weight in pounds.....	60.7	62.2	61.8	59.9
Commercial grades in percentage:				
1 Nor.....	31.6	42.1	36.8	26.3
2 Nor.....	42.1	31.6	31.6	47.4
3 Nor.....	26.3	21.0	21.0	21.0
4 Nor.....	—	5.3	10.6	5.3

Necessary difference—1.0 bushel.

Table No. 18. **CT-609** again led the other varieties in yielding ability and height. It produced strong straw, but was late in maturity. It ranked second in bushel weight, and graded comparatively well. **Apex** and **Thatcher** were practically equal in yielding ability. **Apex** had a distinct advantage in weight per measured bushel but ripened later than **Thatcher**. **Saunders** was low in yield. It was shorter and weaker in straw than the other varieties and ranked last in bushel weight.

General Yield Performance During Past Years

During its first year in Wheat Pool tests **CT-609** has produced excellent yields in Zone 3C. As the information provided during one season is not always conclusive, however, no definite recommendations have been made as yet regarding its value for commercial production. **Apex** has given an average performance in the past, yielding second in 1941, 1946, 1948 and 1949, third in 1943, fourth in 1940 and 1942, and sixth in 1944. With the exception of 1949 when it ranked third, **Thatcher** has placed first or second in yield during each of the nine years it has been tested in Zone 3C. **Saunders** has been tested during the past three years with below average results.

CEREAL VARIETY ZONE GROUP 3D & 3F

TABLE NO. 19.—SUMMARIZED RESULTS FOR ZONES 3D & 3F
(4 satisfactory tests)

	Thatcher	Apex	CT-609	Saunders
Yield in bushels per acre.....	29.1	28.7	31.8	25.8
Days from seeding to ripening.....	109.0	109.0	112.0	109.0
Height of plants in inches.....	41.5	41.5	43.0	38.0
Straw strength.....	7.8	8.0	8.6	7.8
Bushel weight in pounds.....	60.7	62.2	62.2	59.7
Commercial grades in percentage:				
1 Nor.....	25.0	50.0	25.0	
2 Nor.....	75.0	50.0	25.0	75.0
3 Nor.....	—	—	50.0	25.0

No significant grain yield difference between varieties.

Table No. 19. Although the differences in yields were not significant, **CT-609** gave excellent results once again in Zones 3D and 3F. It was superior in height and straw strength and tied for first place in weight per measured bushel. As in most other areas, however, it was late in maturing. **Thatcher** placed second in yield and compared favorably with the other varieties in most characteristics. It graded well but ranked third in bushel weight. **Apex** was approximately equal to Thatcher in most respects and proved superior in bushel weight. **Saunders** ranked fourth in yield, height, bushel weight and grades, and showed no outstanding qualities.

General Yield Performance During Past Years

CT-609 was tested for the first time in 1949. **Thatcher** has been tested during seven years with excellent results. It outyielded all other varieties in 1940, 1941, 1944 and 1948, and placed second in 1942, 1946 and 1949. Thatcher is recommended for use in this area. **Apex** has given an average performance, yielding first in 1946, second in 1940 and 1948, third in 1941 and 1949, and fourth in 1942 and 1944. **Saunders** has been tested twice in this area and has been outyielded by all other varieties on both occasions.

CEREAL VARIETY ZONE GROUP 3E & 3G

TABLE NO. 20.—SUMMARIZED RESULTS FOR ZONES 3E & 3G
(10 satisfactory tests)

	Thatcher	Apex	CT-609	Saunders
Yield in bushels per acre.....	22.7	21.7	21.5	18.0
Days from seeding to ripening.....	104.7	106.9	108.1	104.7
Height of plants in inches.....	26.1	28.4	29.0	25.4
Straw strength.....	8.8	8.8	8.1	8.8
Bushel weight in pounds.....	61.8	62.8	62.4	60.5
Commercial grades in percentage:				
1 Nor.....	41.7	58.4	50.0	25.0
2 Nor.....	33.3	25.0	25.0	50.0
3 Nor.....	16.7	—	—	8.3
4 Nor.....	8.3	8.3	8.3	16.7
No. 5.....	—	8.3	16.7	—

Necessary difference—1.9 bushels.

Table No. 20. **Thatcher** was high in yield, exceeding Saunders by a difference greater than the necessary difference for the zone. It failed to outyield Apex or **CT-609** significantly. Thatcher equalled Saunders in earliness and gave a generally satisfactory performance. **Apex** excelled in bushel weight, graded well and was second in yield. It was later than Thatcher and Saunders in ripening, however. **CT-609** was taller than the other varieties and practically equalled Apex in yield and bushel weight. It was somewhat late in ripening, however, and comparatively weak in straw. **Saunders** was low in yield, short in straw and light in bushel weight.

General Yield Performance During Past Years

The suitability of **Thatcher** for use in this area is demonstrated by its excellent performance during nine years of tests. It outyielded all other varieties six times and placed second in three years. The new strain of **Apex** (Sask. 2177), used in tests since 1946, outyielded Thatcher in 1948 and ranked second to the standard variety in 1946 and 1949. Previously, the original Apex strain had produced below average yields. **CT-609** was used for the first time in 1949 and will require further tests before definite recommendations can be made. **Saunders** tied with Redman for second place in 1947 but yielded fourth and last in 1948 and 1949.

CEREAL VARIETY ZONE 4A

TABLE NO. 21.—SUMMARIZED RESULTS FOR ZONE 4A
(6 satisfactory tests)

	Thatcher	Apex	CT-609	Saunders
Yield in bushels per acre.....	26.6	29.0	33.2	24.1
Days from seeding to ripening.....	102.5	104.0	105.5	100.7
Height of plants in inches.....	37.8	39.8	42.0	35.6
Straw strength.....	8.4	7.7	8.4	8.2
Bushel weight in pounds.....	61.0	63.0	62.7	60.0
Commercial grades in percentage: 1 Nor.....	28.6	42.8	14.4	14.4
2 Nor.....	42.8	57.2	42.8	28.6
3 Nor.....	28.6	—	42.8	57.0

Necessary difference—2.1 bushels.

Table No. 21. **CT-609** outyielded all other varieties significantly. It excelled in height, had strong straw and produced good bushel weight. Its late ripening characteristic is an unfavorable feature in this area, however. **Apex** outweighed the other varieties and graded well. It placed second in yielding ability but ripened somewhat late and had comparatively weak straw. **Thatcher** was third in yield but gave an otherwise satisfactory performance. **Saunders** proved inferior in yield, bushel weight, height and grading ability. Its early maturity is an advantage in areas where the frost-free season is short.

General Yield Performance During Past Years

CT-609 gave an excellent yield performance during the past year. It is a new variety, however, and further tests must be carried out before recommendations for its use can be made. **Apex** has been tested seven times in this zone since 1940. It ranked first in yield in 1948, second in 1941, 1943, 1946 and 1949, fourth in 1944, and fifth in 1940. Since 1946, when the new strain (Sask. 2177) came into use, Apex has equalled or exceeded Thatcher in yield in Wheat Pool tests in this zone. Prior to that time, Apex gave an average performance. **Thatcher**, over an eight-year testing period, has outyielded all other varieties five times and tied for first place once. It ranked second in 1948 and third in 1949. It is officially recommended for use in this zone. **Saunders** has been tested three times. It tied with Thatcher for first place in 1947 but placed fourth in 1948 and 1949.

CEREAL VARIETY ZONE GROUP 3H & 4B

TABLE NO. 22.—SUMMARIZED RESULTS FOR ZONES 3H & 4B
(6 satisfactory tests)

	Thatcher	Apex	CT-609	Saunders
Yield in bushels per acre.....	34.6	34.2	40.7	29.5
Days from seeding to ripening.....	108.3	109.3	109.7	106.7
Height of plants in inches.....	30.8	31.8	33.3	30.3
Straw strength.....	8.1	8.5	7.8	8.4
Bushel weight in pounds.....	62.7	63.7	62.7	62.2
Commercial grades in percentage: 1 Nor.....	16.7	16.7	—	16.7
2 Nor.....	50.0	50.0	16.7	50.0
3 Nor.....	33.3	33.3	66.6	33.3
4 Nor.....	—	—	16.7	—

Necessary difference—2.4 bushels.

Table No. 22. **CT-609** significantly outyielded the other varieties in this area. It ripened late and had comparatively weak straw. **Thatcher** was second in yield and proved satisfactory in other characteristics. **Apex** excelled in bushel weight and straw strength. It practically equalled Thatcher in yield but ripened late. **Saunders** was low yielder for the zone but ripened earlier than the other varieties.

General Yield Performance During Past Years

CT-609 led the other varieties in yield during 1949. Official recommendations regarding the use of this variety are being withheld pending further tests. **Thatcher** has been used in all wheat tests in this area since 1940, outyielding the other varieties in all except two years. In 1949 it placed second to CT-609 and in 1946 it was third. **Apex** has given average results in this zone. **Saunders** has been tested during each of the past three years. It equalled Thatcher in yield in 1947 but was outyielded by all other varieties in 1948 and 1949.

INDIVIDUAL RESULTS

The results of every successful wheat test are shown individually in Table No. 23. The tests are listed in order of Wheat Pool districts and sub-districts. The zone in which each test was analyzed is shown under the column headed "Cereal Variety Zone." Before consulting the following table the reader is advised to refer to the discussion on page 7 headed, "Facts to be Remembered in Reading and Studying Results."



Left to right: The variety tests supervised by Taras Hawryliw, Glaslyn; Leventine Ochitwa, Norquay; and Joe Erza, Candiac.

TABLE NO. 23

Individual Summarized Results of All Tests—Wheat

WHEAT POOL DISTRICT 1

Cereal Variety Zone	Dist.	Sub-Dist.	Test design- nation	Yield bus. per acre	Days seed- ing to ripening	Plant height in inches	Straw strength	Lbs. per measured bushel	Com- mercial grades	Grading remarks	Protein content in per- centage	
THOMAS A. HENDERSON, GAINSBOROUGH												
3A.....	1	1	A	Thatcher....	12.2	—	32	—	57	3 Nor.	—	13.7
				Apex.....	14.9	—	33	—	59	2 Nor.	—	13.9
				CT-609....	13.8	—	33	—	57	3 Nor.	—	12.6
				Saunders....	10.0	—	27	—	55	4 Sp.	—	13.8
Necessary difference—1.8 bushels.												
RALPH E. DEAN, FERTILE												
3A.....	1	2	A	Thatcher....	13.1	97	31	9.0	58	3 Nor.	I.	13.9
				Apex.....	15.5	99	33	9.4	61	2 Nor.	I.	14.1
				CT-609....	16.0	98	33	7.8	59	2 Nor.	—	12.8
				Saunders....	12.4	95	29	8.8	59	3 Nor.	I.	14.0
No significant grain yield difference between varieties.												
KENNETH E. SMITH, DOUGLASTON												
3A.....	1	3	A	Thatcher....	9.7	100	33	9.0	58	2 Nor.	—	13.9
				Apex.....	10.0	105	35	9.4	59	2 Nor.	—	14.2
				CT-609....	11.9	104	39	9.4	59	2 Nor.	—	13.1
				Saunders....	8.8	102	33	9.4	57	3 Nor.	—	14.6
Necessary difference—1.5 bushels.												
JOHN H. LINTON, BROWNING												
3A.....	1	4	A	Thatcher....	12.4	—	—	6.0	56	4 Nor.	—	14.0
				Apex.....	12.1	—	—	8.0	56	4 Nor.	—	14.5
				CT-609....	11.7	—	—	5.0	57	4 Nor.	I.	13.2
				Saunders....	10.0	—	—	6.0	56	4 Nor.	—	13.6
Necessary difference—1.4 bushels.												
REGINALD V. MATTHIES, BRYANT												
2A.....	1	5	A	Thatcher....	16.6	97	25	—	63	1 Nor.	—	15.4
				Apex.....	14.0	98	26	—	62	1 Nor.	—	15.0
				CT-609....	14.5	99	26	—	61	2 Nor.	I.	14.6
				Stewart....	16.8	101	33	—	65	1 C.W.	—	14.8
Necessary difference—1.8 bushels.												
WAYNE KNIBBS, INNES												
2A.....	1	8	A	Thatcher....	8.3	—	—	—	62	2 Nor.	Bl.	16.3
				Apex.....	7.3	—	—	—	60	2 Nor.	I.	15.6
				CT-609....	6.0	—	—	—	59	2 Nor.	—	15.2
				Stewart....	5.5	—	—	—	60	5 C.W.	E.	15.8
No significant grain yield difference between varieties.												
AGNES GHEYSSSENS, FORGET												
2A.....	1	9	A	Thatcher....	6.4	109	20	10.0	60	1 Nor.	—	12.5
				Apex.....	6.5	113	25	9.0	61	1 Nor.	—	12.5
				CT-609....	5.1	113	25	10.0	60	1 Nor.	—	11.1
				Stewart....	10.8	113	27	8.0	66	2 C.W.	Stch.	10.8
Damaged by cattle.												
MARIE GUILLEMIN, FORGET												
3A.....	1	9	B	Thatcher....	17.4	95	30	8.8	63	3 Nor.	I.	15.5
				Apex.....	11.7	95	28	8.4	60	4 Nor.	I.	15.8
				CT-609....	12.3	95	28	8.4	59	4 Nor.	I.	14.7
				Saunders....	12.8	95	29	8.6	60	3 Nor.	I.	14.8
Necessary difference—2.6 bushels.												
RONALD E. EVERARD, WAUCHOPE												
3A.....	1	10	A	Thatcher....	7.7	—	—	—	61	1 Nor.	—	12.8
				Apex.....	6.9	—	—	—	61	1 Nor....	—	13.6
				CT-609....	7.1	—	—	—	61	2 Nor.	I.	13.1
				Saunders....	7.1	—	—	—	60	2 Nor.	I.	12.8
Damaged by birds.												
Tests Discarded on Account of Damage by Drought, Pests, Hail, or Other Causes												
2A.....	1	6	A	Herbert J. Olson, Torquay.								

WHEAT POOL DISTRICT 2

Cereal Variety Zone	Dist.	Sub-Dist.	Test design nation	Varieties	Yield bus. per acre	Days seed-ripening to	Plant height in inches	Straw strength	Lbs. per measured bushel	Commercial grades	Grading remarks	Protein Content in percentage
BUDD J. ALDRED, CEYLON												
2A.....	2	2	A	Thatcher....	14.9	101	25	8.8	59	2 Nor.	—	13.8
				Apex.....	14.9	102	26	7.8	61	1 Nor.	—	14.2
				CT-609....	14.4	103	28	8.8	61	1 Nor.	—	13.0
				Stewart.....	16.6	107	33	10.0	65	1 C.W.	—	13.9
No significant grain yield difference between varieties.												
LORNE S. ELDER, CORONACH												
1A.....	2	3	A	Thatcher....	12.2	85	21	9.0	63	1 Nor.	—	14.3
				Apex.....	11.4	86	19	8.8	64	1 Nor.	—	14.2
				CT-609....	12.3	88	21	8.4	63	1 Nor.	—	13.5
				Stewart.....	9.7	90	26	8.4	65	1 C.W.	—	13.5
Necessary difference—1.3 bushels.												
JOHN E. MCGOWAN, LONESOME BUTTE												
1A.....	2	5	A	Thatcher....	2.0	—	—	—	60	2 Nor.	G.	16.8
				Apex.....	4.3	—	—	—	60	2 Nor.	G.	16.5
				CT-609....	1.9	—	—	—	60	2 Nor.	G.	15.5
				Stewart.....	.7	—	—	—	(A)	(E) 2 C.W. G.	—	15.6
Necessary difference—.7 bushel.												
BERNHARD M. WOLFE, KILLDEER												
1A.....	2	5	B	Thatcher....	11.0	—	—	—	59	2 Nor.	—	16.4
				Apex.....	10.6	—	—	—	60	1 Nor.	—	16.4
				CT-609....	9.5	—	—	—	61	1 Nor.	—	15.0
				Stewart.....	3.0	—	—	—	61	2 C.W.	—	17.1
Necessary difference—2.3 bushels.												
Stewart badly damaged by grasshoppers.												
LEO TARITA, STONEHENGE												
1A.....	2	7	B	Thatcher....	7.2	—	—	—	62	1 Nor.	—	16.6
				Apex.....	9.0	—	—	—	61	1 Nor.	—	16.6
				CT-609....	7.0	—	—	—	62	1 Nor.	—	15.7
				Stewart.....	1.5	—	—	—	61	3 C.W.	G., I.	16.9
Necessary difference—.8 bushel.												
JOHN C. LEONARD, OGEMA												
1A.....	2	9	A	Thatcher....	14.3	—	—	5.0	62	1 Nor.	—	16.0
				Apex.....	11.0	—	—	5.0	61	2 Nor.	I.	15.4
				CT-609....	11.9	—	—	5.0	62	3 Nor.	D., I.	14.4
				Stewart.....	14.3	—	—	8.0	63	3 C.W.	G., I.	16.4
Necessary difference—1.7 bushels.												
CARL LUEBKE, DAHINDA												
1A.....	2	9	B	Thatcher....	8.0	99	14	7.2	59	2 Nor.	—	16.0
				Apex.....	6.6	103	14	7.8	59	2 Nor.	—	15.8
				CT-609....	6.6	100	14	7.4	59	3 Nor.	G.	14.9
				Stewart.....	4.5	103	15	9.0	61	2 C.W.	—	16.2
Necessary difference—.9 bushel.												
ALBERT WEBB, AMULET												
1A.....	2	10	A	Thatcher....	23.5	108	23	6.6	60	2 Nor.	I.	15.4
				Apex.....	18.9	106	20	5.2	59	2 Nor.	—	15.3
				CT-609....	19.3	108	21	5.2	60	2 Nor.	I.	13.9
				Stewart.....	23.2	111	24	8.4	62	1 C.W.	—	15.3
Necessary difference—1.4 bushels.												

Tests discarded on account of damage by drought, pests, hail, or other causes.

2A.....	2	1	A	Jay A. Larsen, Radville.
1A.....	2	6	A	Peter O'Kraince, Fir Mountain.
1A.....	2	6	B	Leo Greffard, Fir Mountain.
1A.....	2	7	A	Carl Klein, Limerick.
1A.....	2	8	A	Rodney E. Dahlman, Readlyn.

(A)=Insufficient to calculate bushel weight.

(E)=Estimated grade.

WHEAT POOL DISTRICT 3

				GORDON F. COWIE, MANKOTA								
1A.....	3	1	A	Thatcher....	10.4	97	—	—	62	1 Nor.	—	15.5
				Apex.....	12.4	98	—	—	62	1 Nor.	—	15.7
				CT-609....	12.3	97	—	—	62	1 Nor.	—	14.6
				Stewart....	10.3	99	—	—	63	1 C.W.	—	15.8

No significant grain yield difference between varieties.

Wheat Pool District 3—Continued

Cereal Variety Zone	Test Sub- desig- nation			Yield bus. per acre	Days seed- ing to ripening	Plant height in inches	Straw strength	Lbs. per meas- ured bushel	Com- merical grades	Grading remarks	Protein content in per- centage	
	Dist.	Dist.	Varieties									
DONALD E. NEELY, CARNAGH												
2C.....	3	6	A	Thatcher....	15.4	99	24	9.6	64	1 Nor.	—	13.7
				Apex.....	15.5	101	25	9.6	64	1 Nor.	—	13.9
				CT-609.....	14.0	105	26	10.0	64	1 Nor.	S. Stch.	12.7
				Stewart.....	13.2	112	33	5.0	66	1 C.W.	—	13.4

No significant grain yield difference between varieties.

Tests discarded on account of damage by drought, pests, hail, or other causes.

1A	3	1	B	Wilbur D. Wilson, McCord.
1C	3	4	A	George W. Brackenbury, Divide.
1C	3	4	B	Rodney A. Hyam, Claydon.
1C	3	4	C	George G. Gilbertson, Frontier.
1C	3	5	A	Wayne A. Syverson, Robsart.
1C	3	5	B	Kenneth Wenaas, Robsart.
1C	3	6	B	Robert S. Arendt, Eastend.
1A	3	7	A	John W. Rebbeck, Jr., South Fork.
1A	3	7	B	Jack B. Nielson, Eastend.
1A	3	9	A	Allan R. Oliver, Crichton.
1A	3	9	B	Daniel Ruest, Admiral.
1A	3	10	A	William McKenzie, Aneroid.
1A	3	10	B	Lloyd E. Carpenter, Hazenmore.

WHEAT POOL DISTRICT 4

DANIEL EREMENKO, MAPLE CREEK												
1B.....	4	2	B	Thatcher.....	6.5	—	—	—	56	4 Nor.	—	17.8
				Apex.....	5.0	—	—	—	56	4 Nor.	—	17.4
				CT-609.....	5.6	—	—	—	58	2 Nor.	—	16.5
				Stewart.....	6.0	—	—	—	61	2 C.W.	—	17.9

No significant grain yield difference between varieties.

CHARLES S. KING, STEWART VALLEY

1A..... 4 3 A Thatcher... 17.8 — 24 — 61 1 Nor. — 15.4
 Apex... 14.6 — 24 — 63 1 Nor.. — 15.0
 CT-609... 17.9 — 26 — 62 1 Nor. — 14.6
 Stewart.... 21.0 — 29 — 64 1 C.W. — 14.6

Necessary difference—1.2 bushels.

RALPH H. COOKE, CARMICHAEL

1A..... 4 4 A Thatcher..... 6.5 85 20 9.0 57 3 Nor. — 18.7
 Apex..... 5.2 94 18 9.0 57 3 Nor. — 19.3
 CT-609..... 5.8 96 17 8.0 58 2 Nor. — 17.9
 Stewart..... 3.1 89 19 8.0 61 2 C.W. — 19.3

Necessary difference—.8 bushel.

KENNETH J. SAWBY, GOLDEN PRAIRIE

1B.....	4	6	A	Thatcher.....	4.8	—	—	—	50	3	Nor.	—	17.9
				Apex.....	3.8	—	—	—	60	1	Nor.	—	18.0
				CT-609.....	3.6	—	—	—	50	2	Nor.	—	17.9
				Stewart.....	1.2	—	—	(A)	(E)	2	C. W.	G.	16.9

Necessary difference—.7 bushel.

VIOLET R. FREITAG, RICHMOND

1B..... 4 7 A Thatcher.... 7.1 — — — 60 1 Nor. — 16.1
 Apex.... 7.8 — — — 61 1 Nor. — 15.8
 CT-609.... 9.6 — — — 61 1 Nor. — 14.1
 Stewart.... 5.0 — — — 61 3 C.W. 1 15.2

Necessary difference—1.4 bushels.

CHARLES E. MARTIN, SCEPTRE

1A..... 4 9 A THATCHER, CHARLES E. MARTIN, CELESTE

Samples Bulked

Tests discarded on account of damage by drought, pests, hail, or other causes.

Tests discarded on account of damage by <i>dro</i>			
1B.....	4	1	A Ernest W. Earl, Sidewood.
1A.....	4	1	B Douglas J. Borman, Piapot.
1B.....	4	2	A Shirley A. Moch, Hatton.
1B.....	4	4	B Leonard Goller, Nadeauville.
1B.....	4	8	A Douglas Kirk, Prelate.
1A.....	4	10	A Norcia F. Currie, Verdell.

(A)—Insufficient to calculate bushel weight.

(A)=Insufficient to ca
(E)=Estimated grade

WHEAT POOL DISTRICT 5

Cereal Variety Zone	Test Sub- dist. disign- nation			Yield bus. per acre	Days seed- ing to ripening	Plant height in inches	Straw strength	Lbs. per measured bushel	Com- merical grades	Grading remarks	Protein content in per- centage
	Dist.	Sub- dist.	Varieties								
ELWOOD E. MacNUTT, DUNKIRK											
1A.....	5	1	A	Thatcher....	11.3	98	26	7.8	59	2 Nor.	— 15.7
				Apex.....	8.6	99	26	8.2	60	1 Nor.	— 15.6
				CT-609....	9.9	98	23	8.2	60	1 Nor.	— 14.9
				Stewart....	10.1	98	28	9.0	63	1 C.W.	— 15.9
Necessary difference—1.0 bushel.											
THOMAS J. RUNCIE, PAMBRUN											
1A.....	5	3	A	Thatcher....	3.2	91	24	7.6	58	2 Nor.	— 15.2
				Apex.....	3.6	91	23	6.8	58	2 Nor.	— 15.2
				CT-609....	3.5	91	22	7.6	57	3 Nor.	— 14.4
				Stewart....	.8	98	28	9.0	(A)	(E) 2 C.W.	— 15.0
Necessary difference—1.1 bushels.											
Stewart badly damaged by grasshoppers.											
STANLEY C. FOWKE, NEVILLE											
1A.....	5	3	B	Thatcher....	9.6	—	—	—	60	1 Nor.	— 15.4
				Apex.....	9.5	—	—	—	61	1 Nor.	— 15.4
				CT-609....	9.5	—	—	—	61	1 Nor.	— 14.2
				Stewart....	3.4	—	—	—	62	2 C.W.	G. 14.9
Necessary difference—1.2 bushels.											
CORNIE D. BROWN, McMAHON											
2C.....	5	4	A	Thatcher....	8.5	99	22	10.0	60	1 Nor.	— 16.5
				Apex.....	9.0	99	23	10.0	63	1 Nor.	— 16.6
				CT-609....	10.2	99	26	10.0	61	2 Nor.	I. 15.7
				Stewart....	7.8	104	30	10.0	65	1 C.W.	— 14.6
Necessary difference—.5 bushel.											
RAYMOND J. RAMBOW, HODGEVILLE											
1A.....	5	5	A	Thatcher....	.6	—	—	—	(A)	(E) 2 Nor.	— 16.0
				Apex.....	.7	—	—	—	(A)	(E) 2 Nor.	— 16.9
				CT-609....	.9	—	—	—	(A)	(E) 2 Nor.	— 15.5
				Stewart....	.2	—	—	—	(A)	(E) 2 C.W.	— 16.4
Badly damaged by grasshoppers.											
CLIVE T. CAMPBELL, PARKBEG											
1A.....	5	7	A	Thatcher....	4.4	81	17	7.0	59	2 Nor.	— 15.4
				Apex.....	4.6	81	17	7.0	60	1 Nor.	— 15.1
				CT-609....	4.7	82	16	9.0	59	2 Nor.	— 14.6
				Stewart....	2.1	82	20	10.0	61	2 C.W.	— 15.4
Necessary difference—.6 bushel.											
Stewart badly damaged by grasshoppers.											
CECIL F. SMITH, ARCHYDAL											
2E.....	5	7	B	Thatcher....	17.5	98	23	6.0	62	2 Nor.	I. 15.6
				Apex.....	15.2	103	23	5.0	63	1 Nor.	— 15.5
				CT-609....	15.9	103	24	6.0	61	1 Nor.	— 15.6
				Stewart....	20.1	106	30	9.8	65	1 C.W.	— 14.8
Necessary difference—1.9 bushels.											
JOYCE AND STANLEY WELLS, TUXFORD											
2E.....	5	8	A	Thatcher....	15.1	101	22	10.0	60	2 Nor.	BL. 15.8
				Apex.....	17.3	101	24	10.0	62	1 Nor.	— 15.8
				CT-609....	16.8	101	26	10.0	61	2 Nor.	I. 15.4
				Stewart....	18.5	104	30	10.0	65	2 C.W.	G. 15.5
Necessary difference—1.9 bushels.											
RUSSELL HALLBORG, HALVORGATE											
1A.....	5	9	A	Thatcher....	1.9	—	—	—	60	1 Nor.	— 15.6
				Apex.....	2.4	—	—	—	60	1 Nor.	— 15.2
				CT-609....	1.6	—	—	—	59	2 Nor.	— 14.6
				Stewart....	.8	—	—	—	(A)	(E) 2 C.W.	— 14.3
Necessary difference—.4 bushel.											
MARJORIE A. GOODING, CENTRAL BUTTE											
1A.....	5	9	B	Thatcher....	3.5	104	—	9.4	59	2 Nor.	— 17.1
				Apex.....	3.8	104	—	9.4	58	2 Nor.	— 17.0
				CT-609....	3.8	103	—	9.0	58	2 Nor.	— 15.4
				Stewart....	3.9	103	—	9.0	59	3 C.W.	— 16.8
No significant grain yield difference between varieties.											

Tests discarded on account of damage by drought, pests, hail, or other causes.

1A..... 5 2 A Paul M. Mang, Arbuthnot.
1A..... 5 5 B Gordon Arnold, Shamrock.
1A..... 5 10 A James C. McKay, Log Valley.
1A..... 5 10 B Henry Unger, Ernfold.

(A)=Insufficient to calculate bushel weight.

(E)=Estimated grade.

WHEAT POOL DISTRICT 6

Cereal Variety Zone	Sub-Dist.	Test design.	Yield per acre	Days seed-ing to ripening	Plant height in inches	Straw strength	Lbs. per bushel	Commercial grades	Grading remarks	Protein Content in percentage
LEONARD J. AND JOSEPH P. O'BYRNE, LEWVAN										
2E.....	6	1	A	Thatcher....	16.5	104	34	8.0	61	1 Nor. — 14.0
				Apex.....	19.3	114	33	8.0	63	1 Nor. — 15.0
				CT-609....	20.4	114	36	9.0	62	1 Nor. — 13.2
				Stewart....	29.2	114	40	9.8	66	1 C.W. — 15.0
Necessary difference—2.4 bushels.										
DUNCAN M. STEWART, BECHARD										
2E.....	6	2	A	Thatcher....	4.0	110	19	9.4	58	2 Nor. — 16.1
				Apex.....	6.6	110	21	9.6	61	2 Nor. I. 15.5
				CT-609....	5.6	110	19	9.2	60	2 Nor. I. 14.4
				Stewart....	9.4	119	23	9.2	61	3 C.W. I. 16.3
Necessary difference—1.9 bushels.										
DAVID G. GOODRICH, WILCOX										
2E.....	6	3	A	Thatcher....	14.0	106	24	9.0	60	1 Nor. — 14.9
				Apex.....	14.1	106	22	8.0	60	1 Nor. — 14.6
				CT-609....	15.1	110	25	9.0	60	1 Nor. — 13.4
				Stewart....	16.2	111	29	9.0	64	1 C.W. — 14.1
No significant grain yield difference between varieties.										
MERDITH W. KNOX, PASQUA										
2E.....	6	5	A	Thatcher....	3.5	112	14	9.0	56	4 Nor. — 16.1
				Apex.....	3.3	113	15	9.0	57	3 Nor. — 16.5
				CT-609....	3.5	113	16	9.0	57	3 Nor. — 16.2
				Stewart....	2.9	118	19	10.0	62	1 C.W. — 15.9
Necessary difference—3 bushel.										
JAMES BEATTY, JR., ADAMS										
2E.....	6	7	A	Thatcher....	12.7	114	25	7.4	60	2 Nor. Bl., I. 14.3
				Apex.....	12.8	114	27	7.0	61	1 Nor. — 15.3
				CT-609....	12.2	114	27	6.6	60	1 Nor. — 14.7
				Stewart....	11.3	115	36	8.8	64	2 C.W. G. 13.9
No significant grain yield difference between varieties.										
GERALD J. CATES, McLEAN										
3C.....	6	8	A	Thatcher....	18.0	—	—	—	60	1 Nor. — 15.9
				Apex.....	17.7	—	—	—	62	1 Nor. — 16.3
				CT-609....	18.9	—	—	—	62	1 Nor. — 14.7
				Saunders....	15.3	—	—	—	59	2 Nor. — 15.2
Necessary difference—1.8 bushels.										
GLEN NORTON, BALCARRES										
3C.....	6	9	A	Thatcher....	27.6	—	27	8.4	62	2 Nor. I. 13.3
				Apex.....	27.9	—	26	8.0	63	1 Nor. — 13.7
				CT-609....	32.0	—	29	7.2	64	1 Nor. — 13.2
				Saunders....	26.1	—	27	8.2	60	2 Nor. I. 13.2
No significant grain yield difference between varieties.										
RAYMOND J. KISTNER, DISLEY										
2B.....	6	10	A	Thatcher....	11.0	—	21	—	61	1 Nor. — 15.3
				Apex.....	11.9	—	22	—	63	1 Nor. — 15.1
				CT-609....	10.7	—	21	—	61	1 Nor. — 14.3
				Stewart....	10.6	—	22	—	64	1 C.W. — 14.9
Damaged by hail.										
Tests discarded on account of damage by drought, pests, hail, or other causes										
2A.....	6	2	B	Jack N. P. Flaman, Jr., Vibank.						
2E.....	6	6	A	M. Douglas Thomson, Pense.						
2B.....	6	10	B	George E. Seifert, Disley.						

WHEAT POOL DISTRICT 7

Cereal Variety Zone	Sub-Dist.	Test design.	Yield per acre	Days seed-ing to ripening	Plant height in inches	Straw strength	Lbs. per bushel	Commercial grades	Grading remarks	Protein Content in percentage
KENNETH A. McCANNEL, DOONSIDES										
3A.....	7	1	A	Thatcher....	20.5	106	31	9.0	59	3 Nor. I. 13.2
				Apex.....	21.6	110	32	9.2	61	3 Nor. D., I. 13.6
				CT-609....	25.9	111	34	10.0	61	3 Nor. D., I. 12.6
				Saunders....	17.3	104	27	7.4	57	3 Nor. — 13.4
Necessary difference—2.7 bushels.										
C. ROY CUTHILL, FLEMING										
3A.....	7	2	A	Thatcher....	16.5	99	44	—	62	2 Nor. I. 12.8
				Apex.....	20.2	101	46	—	63	2 Nor. I. 12.1
				CT-609....	21.5	103	48	—	62	3 Nor. Stch., I. 11.6
				Saunders....	16.0	99	44	—	60	2 Nor. I. 12.3
Necessary difference—2.0 bushels.										

Wheat Pool District 7—Continued

Cereal Variety Zone	Sub-Dist.	Test design- nation	Varieties	Yield bus. per acre	Days seed- ing to ripening	Plant height in inches	Straw strength	Lbs. per meas- ured bushel	Com- mercial grades	Grading remarks	Protein content in per- centage	
ROBERT A. SMYTH, KENNEDY												
3A.....	7	3	A	Thatcher....	26.5	95	36	9.8	63	1 Nor.	—	13.6
				Apex.....	27.8	96	39	9.6	64	1 Nor.	—	14.0
				CT-609....	29.0	99	38	10.0	64	1 Nor.	—	12.5
				Saunders....	23.6	96	35	9.2	62	1 Nor.	—	13.4
Necessary difference—2.8 bushels.												
BERNARD H. HARTNELL, KIPLING												
3A.....	7	4	A	Thatcher....	25.2	101	34	10.0	61	1 Nor.	—	13.9
				Apex.....	23.7	103	33	10.0	63	1 Nor.	—	13.9
				CT-609....	28.0	109	39	10.0	62	1 Nor.	—	14.1
				Saunders....	22.1	100	31	10.0	60	2 Nor.	I.	14.3
Necessary difference—2.8 bushels.												
R. GRANT McCARTHY, CORNING												
3A.....	7	5	A	Thatcher....	11.3	101	21	9.6	61	2 Nor.	I.	15.4
				Apex.....	11.0	104	20	9.6	61	2 Nor.	I.	15.3
				CT-609....	11.1	109	21	10.0	61	4 Nor.	G., I.	14.0
				Saunders....	8.6	101	20	9.0	60	2 Nor.	I.	14.9
Necessary difference—1.3 bushels.												
C. HENRY HOOD, WOLSELEY												
3A.....	7	7	A	Thatcher....	14.1	98	28	10.0	62	1 Nor.	—	15.1
				Apex.....	16.1	100	28	10.0	62	1 Nor.	—	15.2
				CT-609....	15.7	101	31	10.0	63	1 Nor.	—	14.3
				Saunders....	12.6	98	25	10.0	60	1 Nor.	—	14.5
Yields unreliable due to livestock damage.												
DONALD A. POLVI, WAPELLA												
3C.....	7	8	A	Thatcher....	19.8	115	31	7.0	62	1 Nor.	—	14.4
				Apex.....	22.1	116	31	8.8	63	1 Nor.	—	14.2
				CT-609....	23.6	114	35	10.0	63	1 Nor.	—	13.8
				Saunders....	16.4	115	28	6.0	62	1 Nor.	—	13.8
Necessary difference—1.2 bushels.												
HAROLD B. EINARSON, TANTALLON												
3C.....	7	9	A	Thatcher....	11.6	98	25	10.0	60	2 Nor.	I.	14.7
				Apex.....	10.6	101	25	9.8	60	3 Nor.	G., I.	15.9
				CT-609....	12.4	101	28	9.6	59	2 Nor.	—	14.0
				Saunders....	9.4	97	24	10.0	60	2 Nor.	I.	14.3
Necessary difference—1.7 bushels.												
GRANT W. PLEWES, SPY HILL												
3B.....	7	9	B	Thatcher....	22.8	96	36	8.8	61	3 Nor.	D., I.	15.2
				Apex.....	23.5	98	37	8.8	61	3 Nor.	D., I.	15.5
				CT-609....	24.5	101	39	8.6	62	3 Nor.	D., I.	15.2
				Saunders....	20.1	93	35	7.2	61	3 Nor.	D., I.	14.7
Necessary difference—1.2 bushels.												
BLANCHE J. PETRAZEK, ESTERHAZY												
3C.....	7	10	A	Thatcher....	15.7	—	33	10.0	57	3 Nor.	—	15.1
				Apex.....	19.8	—	37	10.0	61	2 Nor.	I.	15.0
				CT-609....	20.3	—	37	10.0	59	2 Nor.	—	14.0
				Saunders....	13.1	—	32	9.2	56	4 Nor.	—	14.9
Necessary difference—1.2 bushels.												
STEPHEN H. BARILLA, GRAYSON												
3C.....	7	11	A	Thatcher....	8.1	—	25	10.0	58	2 Nor.	—	15.2
				Apex.....	10.1	—	25	10.0	61	2 Nor.	I.	14.8
				CT-609....	9.0	—	26	10.0	62	2 Nor.	I.	14.2
				Saunders....	8.0	—	24	9.4	59	2 Nor.	—	14.3
No significant grain yield difference between varieties.												
Tests discarded on account of damage by drought, pests, hail, or other causes.												
3A.....	7	6	A	Edwin Beaudin, Montmartre.								

WHEAT POOL DISTRICT 8

GORDON RATHGEBER, SALTCOATS												
3B.....	8	1	B	Thatcher....	22.4	95	33	9.5	62	1 Nor.	—	13.9
				Apex.....	24.2	96	34	8.8	62	1 Nor.	—	14.4
				CT-609....	26.7	99	42	8.4	62	1 Nor.	—	14.2
				Saunders....	17.6	93	32	9.5	60	1 Nor.	—	14.4
Samples Bulked.												
GEORGE C. SCHAPPERT, SALTCOATS												
3B.....	8	1	C	Thatcher....	16.6	94	33	9.2	59	2 Nor.	—	14.4
				Apex.....	16.9	94	33	9.6	61	2 Nor.	I.	14.5
				CT-609....	16.4	95	39	9.7	61	2 Nor.	I.	13.9
				Saunders....	13.6	94	31	10.0	59	2 Nor.	—	14.6
Samples Bulked.												

Wheat Pool District 8—Continued

Cereal Variety Zone	Dist.	Sub-Dist.	Test design-nation	Varieties	Yield bus. per acre	Days seed-ing to ripening	Plant height in inches	Straw strength	Lbs. per measured bushel	Com-mercial grades	Grading remarks	Protein Content in per centage	
MOLLY V. KELLY, SALTCOATS													
3B.....	8	2	A	Thatcher....	24.1	—	—	—	61	2 Nor.	Bl., I.	14.6	
				Apex.....	25.1	—	—	—	64	1 Nor.	—	15.4	
				CT-609....	30.3	—	—	—	63	1 Nor.	—	13.9	
				Saunders....	19.4	—	—	—	60	2 Nor.	I.	14.4	
Necessary difference—2.0 bushels.													
MAURICE GIBLER, SALTCOATS													
3B.....	8	2	B	Thatcher....	13.6	97	26	9.4	54	4 Sp.	—	14.4	
				Apex.....	13.5	100	26	9.0	56	4 Nor.	—	15.4	
				CT-609....	15.3	100	28	8.4	56	4 Nor.	—	14.1	
				Saunders....	10.5	85	25	8.8	54	4 Sp.	—	14.4	
Necessary difference—1.0 bushel.													
ARTHUR L. HEIDUK, BREWER													
3C.....	8	3	A	Thatcher....	11.5	112	29	9.4	62	2 Nor.	I.	14.4	
				Apex.....	13.8	113	29	9.8	62	2 Nor.	I.	14.8	
				CT-609....	12.4	114	30	9.0	62	2 Nor.	I.	14.0	
				Saunders....	8.2	113	28	9.0	61	2 Nor.	I.	14.1	
Samples Incomplete.													
MIKE E. OLIJNYK, CANA													
3C.....	8	3	B	Thatcher....	16.2	—	—	—	63	2 Nor.	G.	14.7	
				Apex.....	15.1	—	—	—	64	2 Nor.	G.	15.1	
				CT-609....	17.6	—	—	—	64	3 Nor.	V.G.	13.6	
				Saunders....	14.5	—	—	—	63	2 Nor.	G.	14.0	
Necessary difference—9 bushel.													
WARREN AND GRAHAM HALL, ORCADIA													
3C.....	8	4	A	Thatcher....	17.7	—	—	—	58	2 Nor.	—	14.6	
				Apex.....	18.3	—	—	—	59	2 Nor.	—	15.0	
				CT-609....	21.2	—	—	—	60	2 Nor.	Bl.	14.6	
				Saunders....	18.1	—	—	—	59	2 Nor.	—	14.1	
Necessary difference—1.7 bushels.													
RONALD V. DIXON, KAMSACK													
3B.....	8	5	A	Thatcher....	18.2	112	35	9.4	61	1 Nor.	—	14.6	
				Apex.....	20.7	113	36	8.6	63	1 Nor.	—	14.5	
				CT-609....	22.7	115	39	9.0	62	1 Nor.	—	13.7	
				Saunders....	16.6	113	33	9.2	61	1 Nor.	—	14.7	
Necessary difference—.9 bushel.													
JAMES W. STUSEK, AMSTERDAM													
3B.....	8	6	A	Thatcher....	29.7	110	38	8.0	59	2 Nor.	—	13.7	
				Apex.....	30.5	111	38	8.0	62	1 Nor.	—	14.1	
				CT-609....	37.9	112	44	8.0	62	2 Nor.	Stch., I.	13.2	
				Saunders....	25.0	107	35	8.0	58	3 Nor.	D., I.	13.7	
Necessary difference—2.9 bushels.													
GLENN A. BUCK, PREECEVILLE													
3B.....	8	6	B	Thatcher....	13.4	—	—	—	63	2 Nor.	Stch.	10.7	
				Apex.....	18.3	—	—	—	63	1 Nor.	—	11.6	
				CT-609....	18.6	—	—	—	62	1 Nor.	—	11.7	
				Saunders....	12.6	—	—	—	61	2 Nor.	Stch.	11.9	
Necessary difference—2.9 bushels.													
ELSIE KOTYK, RAMA													
3B.....	8	7	A	Thatcher....	29.5	—	—	—	61	3 Nor.	D., I.	13.9	
				Apex.....	26.4	—	—	10.0	62	2 Nor.	I.	13.7	
				CT-609....	30.2	—	—	10.0	62	2 Nor.	I.	13.2	
				Saunders....	24.3	—	—	10.0	61	3 Nor.	D., I.	13.8	
Necessary difference—2.9 bushels.													
HARRY J. YAREMCHUK, HINCHLIFFE													
4A.....	8	8	B	Thatcher....	9.1	—	—	—	60	2 Nor.	Bl.	11.4	
				Apex.....	12.3	—	—	—	63	2 Nor.	Stch., F.	11.7	
				CT-609....	11.7	—	—	—	62	2 Nor.	Stch., F.	10.8	
				Saunders....	7.7	—	—	—	60	2 Nor.	Bl.	11.4	
Necessary difference—1.1 bushels.													
WILLIAM F. MAKOHONIUK, ARRAN													
4A.....	8	10	A	Thatcher....	26.0	—	34	10.0	58	3 Nor.	Bl., I.	14.3	
				Apex.....	27.7	—	36	10.0	61	2 Nor.	I.	15.2	
				CT-609....	33.7	—	35	10.0	62	2 Nor.	I.	13.4	
				Saunders....	23.2	—	35	10.0	58	3 Nor.	Bl., I.	13.8	
Necessary difference—2.2 bushels.													
Tests discarded on account of damage by drought, pests, hail, or other causes													
3B.....	8	9	A	Marvin R. Johnson, Norquay.									

WHEAT POOL DISTRICT 9

Cereal Variety Zone	Sub-Dist.	Test design- nation	Varieties	Yield bus. per acre	Days seed- ing to ripening	Plant height in inches	Straw strength	Lbs. per mea- sured bushel	Com- mer- cial grades	Grading remarks	Protein content in per- centage	
HAROLD TKATCH, JASMIN												
3C.....	9	1	A	Thatcher....	8.3	108	26	9.2	62	3 Nor.	D., I.	14.7
				Apex.....	8.4	108	24	9.4	62	4 Nor.	V.D., I.	15.3
				CT-609....	9.4	109	29	9.4	62	4 Nor.	V.D., I.	14.4
				Saunders....	9.3	106	28	9.2	61	3 Nor.	D., I.	14.7
Damaged by livestock.												
PETER MARSHALL, ITUNA												
3C.....	9	1	B	Thatcher....	21.5	—	31	10.0	61	1 Nor.	—	14.3
				Apex.....	22.6	—	30	8.0	63	1 Nor.	—	14.8
				CT-609....	25.3	—	32	9.4	62	1 Nor.	—	13.5
				Saunders....	17.9	—	30	9.4	61	1 Nor.	—	13.7
Necessary difference—1.1 bushels.												
LORNE P. YANO, LEROSS												
3C.....	9	3	A	Thatcher....	24.4	108	42	9.4	62	3 Nor.	G., I.	15.1
				Apex.....	23.6	109	44	9.0	63	3 Nor.	G., I.	14.6
				CT-609....	27.3	108	51	9.2	62	3 Nor.	G., I.	13.7
				Saunders....	19.5	108	37	9.4	60	2 Nor.	I.	14.7
Necessary difference—3.0 bushels.												
DONALD K. WAGNER, EARL GREY												
3C.....	9	4	A	Thatcher....	22.2	—	—	—	63	1 Nor.	—	13.7
				Apex.....	25.2	—	—	—	64	1 Nor.	—	13.6
				CT-609....	23.3	—	—	—	63	1 Nor.	—	12.1
				Saunders....	22.6	—	—	—	60	1 Nor.	—	13.6
Necessary difference—1.6 bushels.												
THOMAS L. CARDIFF, CYMRIC												
2B.....	9	5	A	Thatcher....	12.7	96	21	10.0	58	2 Nor.	—	15.8
				Apex.....	9.5	96	22	10.0	59	2 Nor.	—	16.7
				CT-609....	11.2	96	21	9.0	60	1 Nor.	—	15.4
				Stewart....	5.7	97	29	9.0	63	1 C.W.	—	15.9
Necessary difference—3.5 bushels.												
Stewart badly damaged by grasshoppers.												
ARTHUR H. SIEMENS, DRAKE												
2B.....	9	6	A	Thatcher....	42.5	—	—	9.0	61	2 Nor.	Bl.	15.0
				Apex.....	32.4	—	—	9.0	63	1 Nor.	—	15.7
				CT-609....	41.8	—	—	8.0	63	1 Nor.	—	14.6
				Stewart....	43.8	—	—	9.0	65	1 C.W.	—	14.8
Necessary difference—1.9 bushels.												
REINHOLD R. WODTKE, PUNNICHY												
3C.....	9	7	A	Thatcher....	26.7	88	29	10.0	61	1 Nor.	—	13.8
				Apex.....	28.4	90	31	10.0	62	1 Nor.	—	15.0
				CT-609....	30.1	93	32	10.0	62	1 Nor.	—	13.9
				Saunders....	25.4	93	28	10.0	60	1 Nor.	—	13.9
Necessary difference—2.2 bushels.												
KENNETH JOHNSON, WYNYARD												
2B.....	9	8	A	Thatcher....	14.9	106	21	10.0	57	3 Nor.	—	18.1
				Apex.....	15.8	107	22	9.8	57	3 Nor.	—	17.3
				CT-609....	15.6	108	24	10.0	57	3 Nor.	—	16.1
				Stewart....	13.2	109	29	9.6	59	3 C.W.	—	17.5
Damaged by hail.												
WILLIAM B. GOTTO, WYNOT												
3C.....	9	9	A	Thatcher....	2.8	—	—	—	57	3 Nor.	B. Bl.	17.0
				Apex.....	2.2	—	—	—	58	3 Nor.	Bl.	16.7
				CT-609....	3.1	—	—	—	60	2 Nor.	Bl.	16.1
				Stewart....	2.3	—	—	—	60	3 C.W.	B. Bl.	16.3
Damaged.												
A. LEON ARNASON, ELFROS												
3C.....	9	10	A	Thatcher....	32.1	102	33	8.6	60	2 Nor.	I.	14.8
				Apex.....	28.5	105	34	9.2	61	2 Nor.	I.	15.7
				CT-609....	35.0	107	34	8.0	61	3 Nor.	D., I.	14.1
				Saunders....	27.1	103	31	7.8	59	3 Nor.	D., I.	15.2
Necessary difference—1.6 bushels.												

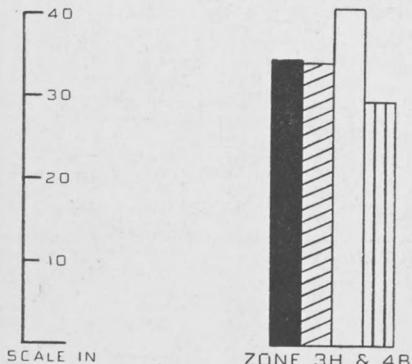
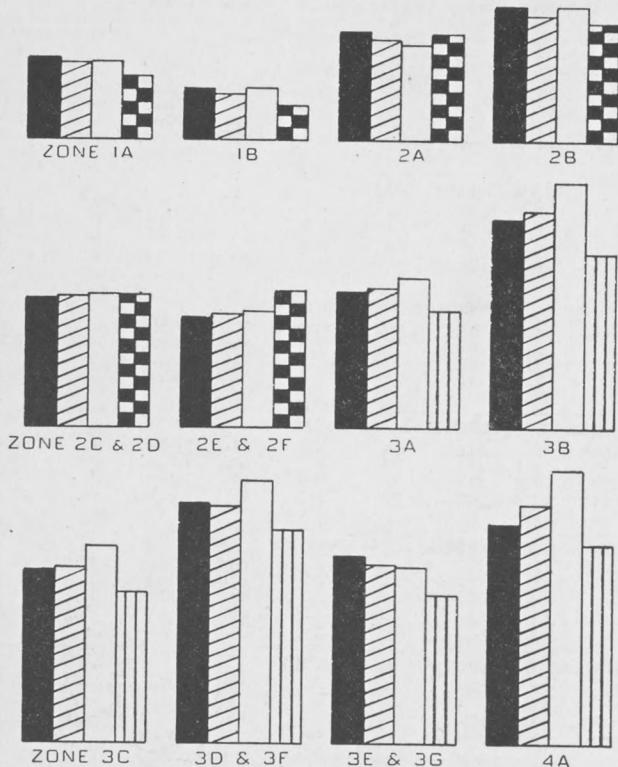
WHEAT POOL DISTRICT 10

ARNOLD WRIGHT, CRAIK												
2B.....	10	1	A	Thatcher....	4.2	—	—	—	61	1 Nor.	—	14.5
				Apex.....	3.9	—	—	—	62	1 Nor.	—	14.4
				CT-609....	4.9	—	—	—	62	1 Nor.	—	12.9
				Stewart....	1.8	—	—	—	61	2 C.W.	—	14.5
Necessary difference—.7 bushel.												
Stewart damaged by grasshoppers.												

Wheat Pool District 10—Continued

Cereal Variety Zone	Dist.	Sub-Dist.	Test design nation	Varieties	Yield bus. per acre	Days seed-ing to ripening	Plant height in inches	Straw strength	Lbs. per measured bushel	Commercial grades		Protein content in percentage
										Grading	Remarks	
RONNY R. FAHLMAN, DILKE												
2B.....	10	1	B	Thatcher....	20.7	—	—	—	62	1 Nor.	—	16.1
				Apex.....	17.5	—	—	—	62	1 Nor.	—	16.1
				CT-609....	15.2	—	—	—	61	2 Nor.	I.	15.3
				Stewart....	12.6	—	—	—	65	1 C.W.	—	14.9
Necessary difference—2.3 bushels.												
FRANK J. LIPP, DILKE												
2B.....	10	1	C	Thatcher....	1.3	104	25	4.6	(A)	(E) 3 Nor.	Bl.	17.2
				Apex.....	1.1	104	24	5.8	(A)	(E) 3 Nor.	Bl.	17.7
				CT-609....	1.2	104	24	5.4	(A)	(E) 3 Nor.	Bl.	16.6
				Stewart....	1.1	104	26	6.2	(A)	(E) 3 C.W.	Bl.	17.3
Badly damaged by wind.												
ALBERT G. HUNTER, RIVERHURST												
1A.....	10	2	A	Thatcher....	4.8	87	20	9.0	54	4 Sp.	—	17.6
				Apex.....	4.7	87	19	10.0	55	4 Sp.	—	17.5
				CT-609....	5.2	87	22	10.0	55	4 Sp.	—	16.7
				Stewart....	3.1	91	24	10.0	61	2 C.W.	—	18.7
Necessary difference—.4 bushel.												
EARLE B. SOMERVILLE, MILDEN												
2B.....	10	4	A	Thatcher....	7.1	111	24	8.0	61	2 Nor.	I.	14.9
				Apex.....	4.7	113	22	8.0	62	1 Nor.	—	14.9
				CT-609....	2.9	113	18	9.0	61	1 Nor.	—	14.4
				Stewart....	12.4	120	24	8.0	65	1 C.W.	—	14.0
Damaged by livestock.												
CLARENCE RAFOSS, CONQUEST												
2B.....	10	5	A	Thatcher....	14.3	—	—	—	60	2 Nor.	Bl.	16.2
				Apex.....	11.7	—	—	—	61	2 Nor.	I.	16.2
				CT-609....	14.4	—	—	—	61	2 Nor.	I.	15.1
				Stewart....	12.8	—	—	—	63	3 C.W.	Bl., I.	15.1
Necessary difference—1.2 bushels.												
DOUGLAS C. VAUGHAN, LOREBURN												
2B.....	10	6	A	Thatcher....	2.4	—	—	—	59	2 Nor.	—	16.9
				Apex.....	3.3	—	—	—	61	1 Nor.	—	17.4
				CT-609....	2.6	—	—	—	60	1 Nor.	—	16.6
				Stewart....	4.0	—	—	—	61	2 C.W.	—	16.0
Badly damaged by grasshoppers and birds.												
ERNEST ERLANDSON, BRODERICK												
2B.....	10	6	B	Thatcher....	12.9	120	33	8.2	60	2 Nor.	Bl.	16.0
				Apex.....	13.1	122	35	8.4	62	2 Nor.	Bl.	16.2
				CT-609....	14.5	125	36	7.8	62	2 Nor.	I.	14.9
				Stewart....	13.1	122	38	9.0	65	2 C.W.	I.	14.6
No significant grain yield difference between varieties.												
PHILIP WIRTH, DAVIDSON												
2B.....	10	7	A	Thatcher....	2.5	109	18	9.8	58	2 Nor.	—	16.3
				Apex.....	2.6	108	20	10.0	56	4 Nor.	—	17.0
				CT-609....	3.8	109	18	10.0	58	2 Nor.	—	15.6
				Stewart....	2.4	110	22	9.5	62	2 C.W.	G.	15.7
Badly damaged by grasshoppers.												
ELAINE M. PODOLESKI, KENASTON												
2B.....	10	7	B	Thatcher....	15.5	81	27	—	62	2 Nor.	I.	15.9
				Apex.....	14.5	82	27	—	62	1 Nor.	—	15.4
				CT-609....	15.9	82	29	—	63	2 Nor.	I.	15.5
				Stewart....	13.5	81	33	—	64	1 C.W.	—	15.9
No significant grain yield difference between varieties.												
PETER FORDEN, FARRERDALE												
2B.....	10	9	A	Thatcher....	24.3	—	26	7.6	59	2 Nor.	—	15.9
				Apex.....	19.4	—	26	8.2	61	1 Nor.	—	16.0
				CT-609....	23.2	—	27	7.8	61	2 Nor.	I.	15.3
				Stewart....	21.7	—	30	8.8	64	2 C.W.	G.	14.7
No significant grain yield difference between varieties.												
RUSSELL A. ADAIR, HARRIS												
2B.....	10	10	A	Thatcher....	16.6	—	—	—	61	2 Nor.	Bl., I.	16.0
				Apex.....	15.3	—	—	—	62	1 Nor.	—	15.7
				CT-609....	15.0	—	—	—	63	2 Nor.	I.	15.1
				Stewart....	14.2	—	—	—	65	1 C.W.	—	15.7
No significant grain yield difference between varieties.												

HISTOGRAMS SHOWING COMPARATIVE WHEAT YIELDS.



SCALE IN
BUSHELS

THATCHER

APFX

GT-608

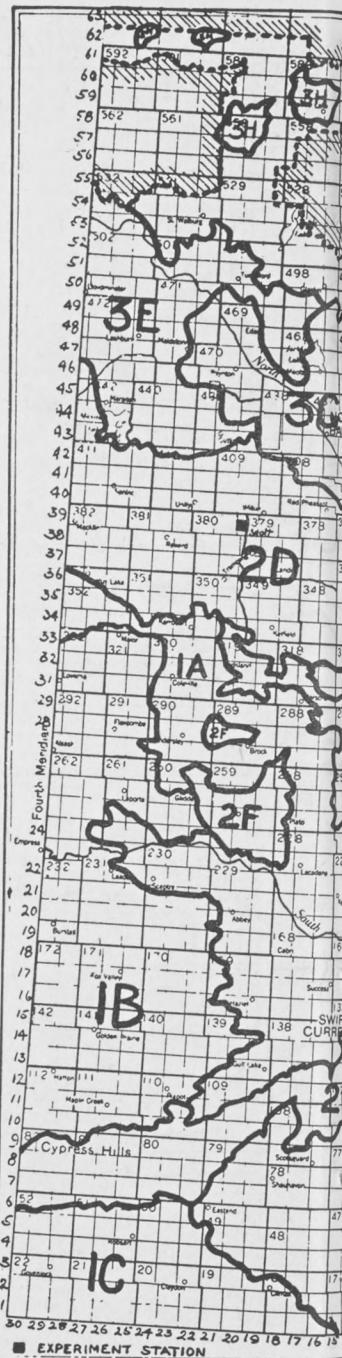
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SAUNDERS

CT-609

STEWART

SAUNDERS



Cereal Variety Zones of Saskatchewan



Wheat Pool District 10—Continued

Cereal Variety Zone	Sub-Dist.	Test design	Varieties	Yield bus. per acre	Days seed-ripening to	Plant height in inches	Straw strength	Lbs per measured bushel	Commercial grades	Grading remarks	Protein Content in percentage
RICHARD M. CAMPBELL, TESSIER											
2B	10	10	B	Thatcher....	9.6	—	—	57	3 Nor.	—	16.4
				Apex.....	8.7	—	—	59	2 Nor.	—	16.2
				CT-609....	7.9	—	—	61	1 Nor.	—	15.3
				Stewart....	5.4	—	—	62	1 C.W.	—	16.1

Necessary difference—1.4 bushels.

Tests discarded on account of damage by drought, pests, hail, or other causes.

2B..... 10 8 A Rudy J. Gross, Renown.

(A)=Insufficient to calculate bushel weight.

(E)=Estimated grade.

WHEAT POOL DISTRICT 11

ERNEST W. ROGERSON, D'ARCY											
1A	11	6	A	Thatcher....	16.4	—	—	54	4 Sp.	—	13.0
				Apex.....	16.3	—	—	57	3 Nor.	—	14.1
				CT-609....	17.0	—	—	54	No. 5	I.	13.3
				Stewart....	16.4	—	—	58	3 C.W.	—	14.8

Samples Incomplete.

BRUCE L. RAMSEY, HERSCHEL												
2F	11	8	A	Thatcher....	22.8	109	29	7.0	62	1 Nor.	—	13.6
				Apex.....	21.0	106	30	7.0	64	1 Nor.	—	13.2
				CT-609....	23.1	113	32	8.0	63	1 Nor.	—	13.5
				Stewart....	25.3	115	39	9.0	65	1 C.W.	—	13.6

No significant grain yield difference between varieties.

ROY I. NEIL, COLEVILLE												
1A	11	9	A	Thatcher....	26.0	106	27	7.4	64	1 Nor.	—	15.6
				Apex.....	22.8	105	28	9.2	64	1 Nor.	—	15.5
				CT-609....	25.2	107	30	9.0	65	1 Nor.	—	15.5
				Stewart....	23.6	112	31	5.0	65	1 C.W.	—	15.6

Necessary difference—1.2 bushels.

Tests discarded on account of damage by drought, pests, hail, or other causes

1A..... 11 1 A J. Roger McDonald, Sanctuary
2F..... 11 2 A Clare E. Sonmor, Forgan
2F..... 11 7 A Clarence A. Collins, Rosetown.

WHEAT POOL DISTRICT 12

GLEN A. McLEOD, BIGGAR											
2D	12	1	A	Thatcher....	22.5	—	—	63	1 Nor.	—	14.8
				Apex.....	23.1	—	—	64	1 Nor.	—	15.1
				CT-609....	25.6	—	—	61	2 Nor.	I.	14.3
				Stewart....	30.0	—	—	59	3 C.W.	—	13.7

Necessary difference—2.6 bushels.

NORMAN MEGER, CANDO												
2D	12	2	A	Thatcher....	20.4	116	26	9.0	64	1 Nor.	—	16.7
				Apex.....	20.9	116	26	9.0	65	1 Nor.	—	16.1
				CT-609....	21.5	116	26	9.0	65	1 Nor.	—	15.0
				Stewart....	18.2	125	30	7.0	66	1 C.W.	—	15.8

No significant grain yield difference between varieties.

JAMES N. GORING, RUTHILDA												
2D	12	3	A	Thatcher....	9.4	122	23	—	60	2 Nor.	Bl.	15.6
				Apex.....	8.2	123	23	—	62	1 Nor.	—	15.2
				CT-609....	9.0	122	23	—	62	2 Nor.	I.	14.3
				Stewart....	7.1	122	24	—	63	1 C.W.	—	15.1

No significant grain yield difference between varieties.

TONY G. KRAFT, SALVADOR												
2D	12	5	A	Thatcher....	18.1	—	—	—	63	1 Nor.	—	15.7
				Apex.....	19.1	—	—	—	64	1 Nor.	—	16.3
				CT-609....	16.5	—	—	—	65	1 Nor.	—	14.6
				Stewart....	20.5	—	—	—	64	1 C.W.	—	16.2

No significant grain yield difference between varieties.

Wheat Pool District 12—Continued

Cereal Variety Zone	Sub-Dist.	Test design, nation	Varieties	Yield bus. per acre	Days seed-ing to ripening	Plant height in inches	Straw strength	Lbs. per measured bushel	Com-mercial grades	Grading remarks	Protein content in percentage	
EDWIN J. STANG, PRIMATE												
2D.....	12	6	A	Thatcher....	3.0	—	—	61	1 Nor.	—	16.1	
				Apex.....	3.0	—	—	62	1 Nor.	—	16.1	
				CT-609....	3.2	—	—	62	1 Nor.	—	14.9	
				Saunders....	2.6	—	—	60	1 Nor.	—	15.6	
Badly damaged by grasshoppers.												
BRYON R. HAYWARD, UNITY												
2D.....	12	7	A	Thatcher....	14.9	—	—	63	1 Nor.	—	13.3	
				Apex.....	15.7	—	—	63	1 Nor.	—	13.6	
				CT-609....	16.4	—	—	63	2 Nor.	Stch.	12.0	
				Stewart....	16.2	—	—	66	1 C.W.	—	12.5	
No significant grain yield difference between varieties.												
CALVIN J. McGONIGLE, WINTER												
2D.....	12	7	B	Thatcher....	7.9	111	20	8.4	62	1 Nor.	—	13.3
				Apex.....	7.8	113	19	8.0	62	2 Nor.	I.	12.9
				CT-609....	8.7	113	20	7.6	63	3 Nor.	Stch., I.	12.0
				Stewart....	8.6	116	25	7.8	65	2 C.W.	Stch., I.	12.4
Damaged by livestock.												
LESLEY C. CHRISTENSEN, NEILBURG												
3E.....	12	8	A	Thatcher....	14.8	108	24	8.8	62	2 Nor.	I.	17.5
				Apex.....	15.7	108	26	9.2	63	2 Nor.	I.	17.2
				CT-609....	14.7	108	26	9.0	63	2 Nor.	I.	16.7
				Saunders....	14.8	107	25	8.8	62	2 Nor.	I.	16.5
No significant grain yield difference between varieties.												
EDWARD J. HUNTER, CLOAN												
2D.....	12	9	A	Thatcher....	7.1	—	—	—	59	3 Nor.	Bl., G.	—
				Apex.....	9.9	—	—	—	60	3 Nor.	Bl., G.	—
				CT-609....	11.9	—	—	—	61	3 Nor.	Bl., G.	—
				Stewart....	18.5	—	—	—	64	2 C.W.	S.G.	—
Damaged by hail.												
RONALD D. McKEOWN, CUTKNIFE												
3E.....	12	9	B	Thatcher....	26.0	—	—	—	59	2 Nor.	—	16.6
				Apex.....	21.1	—	—	—	62	1 Nor.	—	16.6
				CT-609....	18.3	—	—	—	62	1 Nor.	—	16.7
				Saunders....	19.6	—	—	—	60	2 Nor.	I.	15.8
Necessary difference—3.4 bushels.												
BILLY E. NELSON, PRONGUA												
3G.....	12	10	A	Thatcher....	10.2	—	18	6.4	59	3 Nor.	Bl., I.	18.9
				Apex.....	9.0	—	19	5.8	61	2 Nor.	I.	18.4
				CT-609....	5.9	—	19	4.0	62	2 Nor.	I.	17.2
				Saunders....	7.6	—	18	6.0	56	4 Nor.	—	17.7
Damaged by rodents.												
Tests discarded on account of damage by drought, pests, hail, or other causes.												
2D.....	12	3	B	Jack H. Hart, Landis.								
3E.....	12	8	B	Charles M. G. Gall, Lilydale.								

WHEAT POOL DISTRICT 13

MERVYN J. PAPROSKI, LANIGAN												
2B.....	13	1	A	Thatcher....	20.5	110	—	—	60	3 Nor.	G., I.	15.0
				Apex.....	28.2	113	—	—	61	2 Nor.	I.	15.1
				CT-609....	26.7	111	—	—	61	3 Nor.	G., I.	14.3
				Stewart....	21.7	112	—	—	65	3 C.W. Stch., S.B.P.	13.5	13.5
Necessary difference—3.6 bushels.												
JOSEPH H. A. EARIS, BAY TRAIL												
3C.....	13	1	B	Thatcher....	13.8	—	24	9.0	58	3 Nor.	Bl., I.	17.6
				Apex.....	13.4	—	24	9.0	62	3 Nor.	G., I.	17.7
				CT-609....	15.2	—	24	8.8	62	3 Nor.	D., I.	17.3
				Saunders....	9.7	—	23	8.6	57	3 Nor.	—	16.8
Necessary difference—1.1 bushels.												
E. GERALD BEAVERS, WATROUS												
2B.....	13	2	A	Thatcher....	15.3	123	25	—	60	2 Nor.	Bl.	15.3
				Apex.....	16.6	125	24	—	62	1 Nor.	—	15.5
				CT-609....	16.3	126	24	—	62	1 Nor.	—	15.0
				Stewart....	15.4	127	30	—	65	1 C.W.	—	15.2
No significant grain yield difference between varieties.												

Wheat Pool District 13—Continued

Cereal Variety Zone	Dist.	Sub-Dist.	Test design- nation	Varieties	Yield bus. per acre	Days seed- ing to ripening	Plant height in inches	Straw strength	Lbs. per meas- ured bushel	Com- mercial grades	Grading remarks	Protein content in per- centage
MARJORIE I. BERG, ALLAN												
2B.....	13	3	B	Thatcher....	3.2	—	—	—	59	2 Nor.	—	15.1
				Apex.....	3.1	—	—	—	60	2 Nor.	Bl.	15.6
				CT-609....	2.7	—	—	—	60	2 Nor.	Bl.	14.8
				Stewart....	2.5	—	—	—	63	2 C.W.	Bl.	12.6
Badly damaged by livestock.												
STUART N. MCKENZIE, COLONSAY												
2B.....	13	4	A	Thatcher....	12.1	126	26	9.2	60	2 Nor.	Bl.	15.4
				Apex.....	12.9	129	26	9.2	61	2 Nor.	Bl.	16.1
				CT-609....	12.1	127	28	9.2	62	1 Nor.	—	15.0
				Stewart....	10.3	137	33	10.0	65	2 C.W.	Bl.	15.2
No significant grain yield difference between varieties.												
GEORGE W. TERRY, WARMAN												
2B.....	13	5	A	Thatcher....	9.9	—	23	9.2	63	1 Nor.	—	16.9
				Apex.....	10.4	—	24	10.0	64	1 Nor.	—	16.0
				CT-609....	11.3	—	27	9.6	64	1 Nor.	—	16.4
				Stewart....	9.9	—	31	7.8	65	1 C.W.	—	16.2
No significant grain yield difference between varieties.												
ERNEST BEAULIEU, VONDA												
2B.....	13	8	A	Thatcher....	10.7	80	31	9.0	61	2 Nor.	I.	16.9
				Apex.....	12.3	79	31	8.7	60	3 Nor.	G., I.	16.4
				CT-609....	12.2	82	33	9.2	62	2 Nor.	I.	16.0
				Stewart....	—	—	—	—	—	—	—	—
Stewart destroyed by grasshoppers. Other varieties damaged.												
ARTHUR G. PETERS, ABERDEEN												
3G.....	13	8	B	Thatcher....	47.4	106	27	8.2	62	1 Nor.	—	14.8
				Apex.....	41.3	109	28	8.8	62	1 Nor.	—	14.4
				CT-609....	37.3	114	29	8.2	63	1 Nor.	—	14.8
				Saunders....	31.7	104	26	8.0	59	2 Nor.	—	14.8
Necessary difference—6.5 bushels.												
ALPHONSE SCHLOSSER, BREMEN												
3C.....	13	9	A	Thatcher....	25.1	—	—	—	60	2 Nor.	Bl.	15.5
				Apex.....	22.8	—	—	—	63	1 Nor.	—	16.2
				CT-609....	30.6	—	—	—	63	2 Nor.	F.	14.9
				Saunders....	22.4	—	—	—	59	2 Nor.	—	15.1
Necessary difference—2.2 bushels.												
HUBERT SCHWARK, CUDWORTH												
3C.....	13	9	B	Thatcher....	36.2	—	—	—	62	3 Nor.	D., I.	12.4
				Apex.....	32.6	—	—	—	63	3 Nor.	D., I.	12.6
				CT-609....	38.1	—	—	—	60	4 Nor.	V.Sch., D., I.	11.3
				Saunders....	26.5	—	—	—	62	3 Nor.	D., I.	12.6
Necessary difference—4.5 bushels.												
ALVIN J. HESSDORFER, ST. BENEDICT												
3C.....	13	10	A	Thatcher....	19.8	—	31	9.0	62	1 Nor.	—	15.6
				Apex.....	21.4	—	33	8.8	63	1 Nor.	—	15.7
				CT-609....	24.6	—	35	9.0	63	1 Nor.	—	14.9
				Saunders....	17.5	—	30	8.8	61	1 Nor.	—	15.5
Necessary difference—.7 bushel.												
FLORIAN L. MAMER, LAKE LENORE												
3B.....	13	11	A	Thatcher....	26.5	—	33	9.2	61	1 Nor.	—	14.4
				Apex.....	31.3	—	34	9.6	62	1 Nor.	—	14.7
				CT-609....	32.0	—	36	9.2	62	1 Nor.	—	13.9
				Saunders....	23.3	—	31	9.0	60	2 Nor.	I.	13.9
Necessary difference—2.8 bushels.												
Tests discarded on account of damage by drought, pests, hail, or other causes.												
2B.....	13	3	A	Gary W. Freedon, Dundurn.	—	—	—	—	—	—	—	—

WHEAT POOL DISTRICT 14

ALFRED WEINHANDL, LINTLAW												
4A.....	14	1	A	Thatcher....	31.8	111	37	8.4	61	2 Nor.	I.	14.1
				Apex.....	33.4	113	38	8.8	63	1 Nor.	—	14.0
				CT-609....	37.2	113	40	9.0	63	2 Nor.	I.	13.0
				Saunders....	28.9	110	36	8.8	60	2 Nor.	I.	14.2
Necessary difference—3.5 bushels.												

Wheat Pool District 14—Continued

Cereal Variety Zone	Sub-Dist.	Test design	Varieties	Yield per acre	Days seed-to-ripening	Plant height in inches	Straw strength	Lbs. per measured bushel	Commercial grades	Grading remarks	Protein content in percentage
EVERT H. HOLMSTROM, CLAIR											
3B	14	2	A	Thatcher....	41.2	110	40	—	61	2 Nor.	Bl., I. 12.9
				Apex.....	42.6	111	40	—	62	1 Nor.	— 13.4
				CT-609....	46.6	118	44	—	61	1 Nor.	— 12.7
				Saunders....	29.3	111	40	—	60	2 Nor.	I. 13.0
Necessary difference—3.4 bushels.											
KEITH A. PARKER, NAICAM											
3B	14	3	A	Thatcher....	22.3	100	34	9.0	61	3 Nor.	D., I. 14.1
				Apex.....	23.1	105	36	9.0	63	1 Nor.	— 14.8
				CT-609....	26.3	105	38	9.0	62	2 Nor.	I. 13.9
				Saunders....	16.9	99	30	9.0	61	1 Nor.	— 14.3
Necessary difference—2.5 bushels.											
MARVEL L. BENZ, DAHLTON											
3B	14	4	A	Thatcher....	31.3	109	37	8.4	61	2 Nor.	I. 12.9
				Apex.....	33.3	111	41	8.6	63	2 Nor.	I. 13.4
				CT-609....	37.4	113	44	8.4	62	2 Nor.	I. 12.6
				Saunders....	27.2	109	35	8.6	59	3 Nor.	I. 13.5
Necessary difference—3.6 bushels.											
LAWRENCE M. SLIND, ARCHERWILL											
4A	14	4	B	Thatcher....	12.4	—	—	—	62	1 Nor.	— 13.7
				Apex.....	17.5	—	—	—	64	1 Nor.	— 14.3
				CT-609....	16.1	—	—	—	63	3 Nor.	Stch., I. 12.1
				Saunders....	10.9	—	—	—	60	3 Nor.	D., I. 13.3
Necessary difference—2.0 bushels.											
RONALD CHOQUETTE, PERIGORD											
3B	14	5	B	Thatcher....	24.3	—	—	—	54	4 Sp.	— 13.8
				Apex.....	22.2	—	—	—	56	4 Nor.	— 14.3
				CT-609....	29.8	—	—	—	56	4 Nor.	— 13.7
				Saunders....	20.2	—	—	—	53	4 Sp.	— 14.5
Necessary difference—2.4 bushels.											
MICHAEL NAWROCKI, SYLVANIA											
4A	14	7	A	Thatcher....	55.3	108	41	4.2	62	2 Nor.	I. 15.3
				Apex.....	53.7	109	44	3.4	64	2 Nor.	I. 15.4
				CT-609....	63.4	112	47	4.0	63	3 Nor.	D., I. 14.1
				Saunders....	44.4	110	37	3.4	60	3 Nor.	Bl., I. 14.8
Samples Incomplete.											
JOHN D. BEECHING, STEEN											
3F	14	7	B	Thatcher....	25.4	109	45	—	58	2 Nor.	— 14.6
				Apex.....	25.3	109	43	—	60	2 Nor.	Bl. 15.6
				CT-609....	28.9	112	44	—	61	3 Nor.	Bl., I. 14.1
				Saunders....	22.6	109	38	—	57	3 Nor.	— 14.8
Necessary difference—2.9 bushels.											
GORDON L. WARNER, BEATTY											
3D	14	8	A	Thatcher....	21.5	—	—	—	61	2 Nor.	Bl. 15.0
				Apex.....	23.5	—	—	—	63	1 Nor.	— 15.0
				CT-609....	24.5	—	—	—	63	1 Nor.	— 13.9
				Saunders....	18.9	—	—	—	60	2 Nor.	Bl., I. 14.2
No significant grain yield difference between varieties.											
R. DOUGLAS CLEGHORN, KINISTINO											
4A	14	9	A	Thatcher....	41.2	89	37	10.0	61	3 Nor.	D., I. 13.8
				Apex.....	43.3	93	37	9.6	63	2 Nor.	I. 14.9
				CT-609....	51.6	96	42	9.6	63	3 Nor.	D., I. 12.6
				Saunders....	38.4	87	34	10.0	61	3 Nor.	D., I. 14.2
Necessary difference—5.1 bushels.											
RICHARD FAVREAU, ZENON PARK											
3F	14	10	A	Thatcher....	28.6	—	—	—	62	2 Nor.	I. 11.7
				Apex.....	25.4	—	—	—	63	2 Nor.	Stch. 11.5
				CT-609....	32.5	—	—	—	63	3 Nor.	Stch., I. 11.6
				Saunders....	23.0	—	—	—	61	2 Nor.	Stch. 11.8
Necessary difference—2.5 bushels.											
KENNETH L. MORTENSEN, PONTRILAS											
3F	14	11	A	Thatcher....	40.7	—	38	7.8	62	1 Nor.	— 14.2
				Apex.....	40.6	—	40	8.0	63	1 Nor.	— 14.4
				CT-609....	41.4	—	42	8.6	62	2 Nor.	I. 13.8
				Saunders....	38.8	—	38	7.8	61	2 Nor.	Stch., I. 13.5
No significant grain yield difference between varieties.											

Tests discarded on account of damage by drought, pests, hail, or other causes.

4A..... 14 5 A Bernard Renneberg, Kinloch.

WHEAT POOL DISTRICT 15

Cereal Variety Zone	Dist.	Sub-Dist.	Test design- nation	Varieties	Yield bus. per acre	Days seed- ing to ripening	Plant height in inches	Straw strength	Lbs. per measured bushel	Com- mercial grades	Grading remarks	Protein content in per- centage
WALTER H. FRIESEN, ROSTHORN												
3B.....	15	4	A	Thatcher....	15.0	102	24	8.0	61	1 Nor.	—	16.1
				Apex.....	15.0	102	25	8.0	62	1 Nor.	—	17.2
				CT-609....	16.4	103	26	8.0	63	1 Nor.	—	14.2
				Saunders....	12.3	101	22	8.0	61	1 Nor.	—	14.7

Necessary difference—1.5 bushels.

VAN DAVIES, KILWINNING

3B.....	15	5	A	Thatcher....	28.1	110	43	10.0	60	3 Nor.	Bl., I.	14.3
				Apex.....	28.7	111	43	10.0	62	2 Nor.	I.	14.6
				CT-609....	34.0	110	48	10.0	62	2 Nor.	I.	13.5
				Saunders....	23.0	109	39	10.0	59	2 Nor.	—	14.1

Necessary difference—4.2 bushels.

IRVIN W. JUNG, MONT NEBO

4B.....	15	7	A	Thatcher....	36.1	—	—	—	63	1 Nor.	—	13.8
				Apex.....	33.7	—	—	—	64	1 Nor.	—	14.7
				CT-609....	41.9	—	—	—	62	3 Nor.	Stch., I.	12.9
				Saunders....	28.3	—	—	—	62	1 Nor.	—	14.4

Necessary difference—5.6 bushels.

TOM CARTIER, WHITE STAR

3B.....	15	9	A	Thatcher....	43.4	111	42	9.8	61	2 Nor.	F.	15.2
				Apex.....	43.0	113	43	9.4	63	3 Nor.	G., F.	15.2
				CT-609....	51.5	113	48	9.8	62	4 Nor.	G., I., F.	14.0
				Saunders....	38.0	110	38	9.2	61	2 Nor.	F.	14.1

Necessary difference—2.5 bushels.

ALLAN S. MCKAY, GARRICK

4A.....	15	11	A	Thatcher....	39.0	102	40	9.6	63	1 Nor.	—	14.1
				Apex.....	39.5	101	44	6.6	63	1 Nor.	—	14.9
				CT-609....	48.6	101	46	9.6	63	1 Nor.	—	13.3
				Saunders....	35.6	96	36	8.8	61	1 Nor.	—	14.4

Necessary difference—4.6 bushels.

Tests discarded on account of damage by drought, pests, hail, or other causes.

3B.....	15	10	A	Alan D. Buchanan, Weirdale.
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WHEAT POOL DISTRICT 16

3G.....	16	1	A	KENNETH W. ZALESCHUK, MAYMONT								
				Thatcher....	17.8	—	—	—	63	1 Nor.	—	16.1
				Apex.....	17.6	—	—	—	64	1 Nor.	—	16.1
				CT-609....	17.9	—	—	—	64	1 Nor.	—	15.1
				Saunders....	15.4	—	—	—	63	1 Nor.	—	15.1

Necessary difference—.9 bushel.

DELBERT W. BRONSCHE, RADISSON

3G.....	16	1	C	Thatcher....	10.9	94	—	9.0	64	1 Nor.	—	15.4
				Apex.....	11.8	98	—	9.2	65	1 Nor.	—	15.7
				CT-609....	14.2	98	—	9.0	64	2 Nor.	I.	14.1
				Saunders....	9.0	97	—	9.2	62	1 Nor.	—	15.4

Necessary difference—1.4 bushels.

GEORGE M. SYMCHYCH, HAFFORD

3B.....	16	2	A	Thatcher....	22.9	115	24	9.0	61	2 Nor.	I.	16.5
				Apex.....	23.3	113	28	7.0	63	1 Nor.	—	15.9
				CT-609....	25.6	119	33	8.2	62	2 Nor.	I.	15.2
				Saunders....	19.6	114	22	8.0	60	2 Nor.	I.	15.5

Necessary difference—1.8 bushels.

JACK K. BOUMA, NORTH BATTLEFORD

3G.....	16	3	A	Thatcher....	16.2	82	22	9.8	62	2 Nor.	I.	17.7
				Apex.....	15.5	83	22	10.0	63	1 Nor.	—	17.8
				CT-609....	15.5	83	23	10.0	63	1 Nor.	—	17.1
				Saunders....	14.2	79	23	9.6	57	3 Nor.	—	17.3

Necessary difference—1.1 bushels.

PETER HALAGAZA, SANDWITH

3G.....	16	3	B	Thatcher....	31.4	116	41	9.0	62	3 Nor.	F.	14.6
				Apex.....	28.9	119	43	9.0	63	4 Nor.	D., F.	15.1
				CT-609....	29.7	120	45	8.8	61	No. 5	G., F.	13.6
				Saunders....	23.3	117	38	9.4	61	2 Nor.	S. F.	14.4

Necessary difference—3.9 bushels.

Wheat Pool District 16—Continued

Cereal Variety Zone	Sub-Dist.	Test design.	Yield bus. per acre	Days seed-ing to ripening	Plant height in inches	Straw strength	Lbs. per measured bushel	Commercial grades	Grading remarks	Protein Content in percentage	
LIONEL BLANCHETTE, JACKFISH LAKE											
3E.....	16	4	A	Thatcher.... 17.4	94	—	64	2 Nor.	Bl., I.	11.4	
				Apex..... 17.7	96	—	65	2 Nor.	Stch., I.	11.3	
				CT-609.... 17.9	96	—	64	4 Nor.	V. Stch., I.	10.7	
				Saunders.... 14.4	95	—	63	2 Nor.	Bl., I.	11.6	
Necessary difference—1.1 bushels.											
KEN W. WESSON, MAIDSTONE											
3E.....	16	5	C	Thatcher.... 29.3	113	30	10.0	63	1 Nor.	—	13.5
				Apex..... 28.9	114	33	10.0	63	1 Nor.	—	13.6
				CT-609.... 30.1	116	36	10.0	63	1 Nor.	—	12.4
				Saunders.... 22.5	114	28	10.0	62	2 Nor.	I.	13.1
Necessary difference—1.9 bushels.											
WAYNE NIELSEN, LASHBURN											
3E.....	16	6	A	Thatcher.... 13.3	128	20	9.0	60	4 Nor.	F.	14.9
				Apex..... 7.0	133	29	8.0	58	No. 5	G., F.	15.2
				CT-609.... 10.5	133	27	6.0	57	No. 5	G., F.	14.2
				Saunders.... 6.6	128	18	9.0	59	4 Nor.	F.	14.3
Badly damaged by frost.											
BERNARD STARLING, CATER											
4B.....	16	9	A	Thatcher.... 20.6	112	22	—	63	2 Nor.	G.	12.5
				Apex..... 22.5	114	22	—	64	3 Nor.	G., I.	13.3
				CT-609.... 25.1	114	23	—	62	3 Nor.	G., I.	11.6
				Saunders.... 16.0	112	23	—	63	2 Nor.	I.	12.7
Necessary difference—3.0 bushels.											
WALTER ILNESKY, RANGER											
4B.....	16	10	A	Thatcher.... 28.5	—	33	10 0	64	3 Nor.	D., I.	15.2
				Apex..... 30.8	—	34	10.0	65	2 Nor.	I.	15.1
				CT-609.... 34.3	—	35	10 0	64	3 Nor.	D., I.	13.9
				Saunders.... 24.8	—	32	10 0	64	3 Nor.	Bl., I.	14.2
Necessary difference—3.1 bushels.											
ROBERT CHALIFOUR, LEOVILLE											
4B.....	16	10	B	Thatcher.... 54.0	—	—	—	60	2 Nor.	I.	15.0
				Apex..... 48.0	—	—	—	61	2 Nor.	I.	15.8
				CT-609.... 63.0	—	—	—	61	2 Nor.	I.	14.4
				Saunders.... 45.7	—	—	—	59	2 Nor.	—	14.8
Necessary difference—2.9 bushels.											
RONALD M. PETHICK, MAYFAIR											
3G.....	16	10	C	Thatcher.... 16.1	101	27	—	62	1 Nor.	—	16.3
				Apex..... 18.5	102	27	—	64	1 Nor.	—	16.4
				CT-609.... 19.8	105	27	—	63	1 Nor.	—	15.6
				Saunders.... 15.1	101	27	—	62	1 Nor.	—	16.1
Necessary difference—1.6 bushels.											
ROY OLLIS, NORTH MAKWA											
3H.....	16	11	A	Thatcher.... 47.4	103	37	8.2	63	2 Nor.	S.F.	14.0
				Apex..... 46.0	103	39	8.0	64	2 Nor.	S.F.	14.9
				CT-609.... 54.3	104	41	7.8	65	3 Nor.	F.	13.2
				Saunders.... 42.0	99	35	7.4	62	2 Nor.	S.F.	14.0
No significant grain yield difference between varieties.											
MELVIN P. FRIESEN, DORINTOSH											
4B.....	16	11	B	Thatcher.... 21.2	110	31	6.0	63	3 Nor.	Stch., I.	10.6
				Apex..... 24.4	111	32	7.6	64	3 Nor.	Stch., I.	10.1
				CT-609.... 25.8	111	34	5.6	62	4 Nor.	V. Stch.	9.3
				Saunders.... 19.9	109	31	7.8	63	3 Nor.	Stch., I.	10.2
Necessary difference—2.2 bushels.											
Tests discarded on account of damage by drought, pests, hail, or other causes.											
3E.....	16	5	A	Nellie Janus, Waseca.							
3E.....	16	7	A	Louis de Montarnal, Butte St. Pierre.							
3E.....	16	9	B	Orland O. Turriff, Fairholme.							



Donald Polvi of Wapella and the sheaves from his variety test.

FLAX TESTS

The flax project consisted of 38 tests in which the varieties Royal, Rocket, Dakota, Victory and Sheyenne were grown. The tests were conducted mainly in the eastern and northern areas of the province, although a limited number were distributed in the dark brown soils of the open prairie district. For analysis, the flax tests have been grouped in three general regions identified as South-East, East-Central and North-East.

The South-East area includes Cereal Variety Zones 2A, 2E, 3A and the eastern part of 1A. Nine satisfactory tests were conducted throughout this part of the province.

The East-Central area includes Cereal Variety Zones 3B (South), 3C and 2B (East). Seven satisfactory tests were conducted.

The North-East area includes Cereal Variety Zones 3B (North), 3G (East), 3F and 4A. Five satisfactory tests were conducted.

The tables which follow give the comparative performances of the varieties in each area, as calculated from the average of all satisfactory tests.

DESCRIPTION OF VARIETIES

Royal was originated by selection from Crown at the University of Saskatchewan. It is moderately resistant to wilt and rust. Royal has blue blossoms, and brown seeds which produce a high percentage of oil.

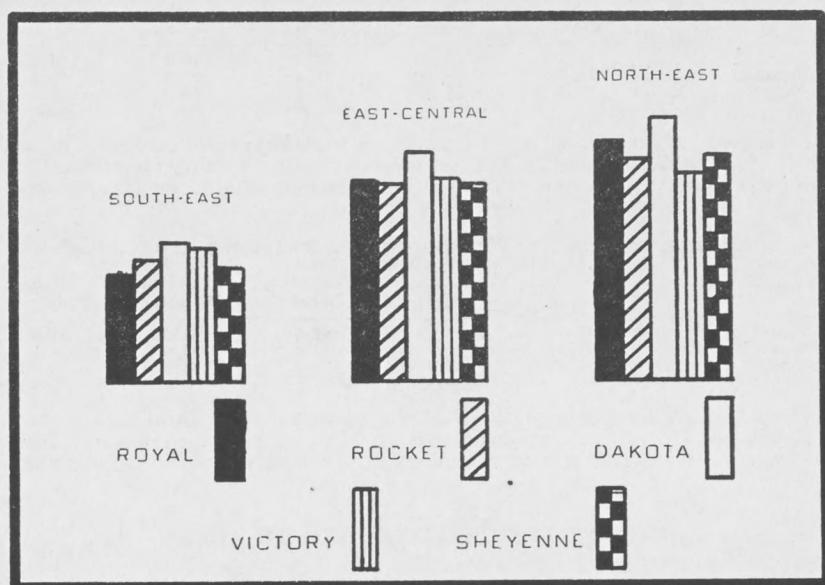
Rocket was developed from the cross Argentine 8C X Redwing at the Central Experimental Farm, Ottawa. Rocket has blue blossoms and brown seeds which produce a high percentage of good quality oil. It is resistant to rust but slightly susceptible to wilt.

Dakota was developed by the United States Department of Agriculture and the North Dakota Agricultural Experiment Station from the cross Renew X Bison. It is resistant to wilt and most races of stem rust. Dakota has blue blossoms, and medium sized brown seeds which produce good quality oil.

Victory was produced by selection at the North Dakota Agricultural Experiment Station. A selection from 5585 X Argentine was crossed with Smoky Golden and Victory was selected from the result. Victory has white blossoms, and brown seeds which produce a high percentage of good quality oil. It is resistant to rust and wilt, but susceptible to pasmo.

Sheyenne was developed by Dr. H. H. Flor of the State College Station, Fargo, North Dakota, as the result of a cross between Ottawa 770B X Buda. It is a brown seeded variety which produces average yields of grain and good quality oil. It is early maturing, wilt and rust resistant, and possesses some tolerance to pasmo.

HISTOGRAMS SHOWING FLAX YIELDS BY AREAS.



For purposes of analysis the flax tests were grouped in three areas. The South-Eastern area includes Cereal Variety Zones 2A, 2E, 3A, and the Eastern part of 1A. The East-Central area includes Cereal Variety Zones 3B (South), 3C and 2B (East). The North-Eastern area includes Cereal Variety Zones 3B (North), 3G (East), 3F and 4A. See Cereal Variety Zone map, page 31.

TABLE NO. 24.—AVERAGE YIELDS IN BUSHELS PER ACRE
SUMMARIZED BY AREAS

Area	No. of Satisfactory Tests	Royal	Rocket	Dakota	Victory	Sheyenne	Necessary Difference in Bushels
South-East.....	9	6.6	7.5	8.6	8.3	7.0	1.7
East-Central.....	7	12.4	12.2	14.1	12.5	12.2	*
North-East.....	5	14.8	13.7	16.2	12.8	13.9	2.2

*—No significant grain yield difference between varieties.

Table No. 24. An average of all successful flax tests in the province shows **Dakota** to be the highest in yield. The other varieties were all practically equal in yield on a provincial average basis but showed some variation within each of the areas. **Dakota** was high in yield in each area. It was followed by **Victory** in the South-East and East-Central areas, and by **Royal** in the North-East. **Royal** varied considerably in comparative yield, placing fifth in the South-Eastern area and second in the North-East. **Victory**, on the other hand, yielded comparatively well in the South-East but was inferior in the North-East. Generally, while **Dakota** proved superior in all areas, and **Victory** and **Royal** showed regional yielding ability, the results of the remaining varieties were inconclusive.

TABLE NO. 25.—AVERAGE NUMBER OF DAYS FROM SOWING TO RIPENING
SUMMARIZED BY AREAS

Area	Royal	Rocket	Dakota	Victory	Sheyenne
South-East.....	85.8	88.0	86.6	88.4	84.6
East-Central.....	104.4	102.4	102.6	103.2	102.0
North-East.....	111.0	110.3	110.3	118.0	104.7

Table No. 25. **Sheyenne** consistently ripened earlier than the other varieties. It was followed by **Dakota** and **Rocket**. Only minor differences appeared between these two varieties but an average of all tests gives **Dakota** a slight edge in earliness. **Royal** generally was fourth in reaching maturity and **Victory** placed fifth.

TABLE NO. 26.—AVERAGE HEIGHT OF PLANTS IN INCHES
SUMMARIZED BY AREAS

Area	Royal	Rocket	Dakota	Victory	Sheyenne
South-East.....	18.3	18.4	17.3	18.3	18.7
East-Central.....	21.8	21.2	21.4	21.6	22.2
North-East.....	24.0	24.3	22.3	23.3	23.3

Table No. 26. An average of all tests shows that **Sheyenne** exceeded the other varieties in height. **Royal** and **Rocket** tied for second place. **Victory** placed fourth and **Dakota** was shortest. Differences in height were generally of a minor nature.

TABLE NO. 27.—AVERAGE WEIGHT PER MEASURED BUSHEL
SUMMARIZED BY AREAS

Area	Royal	Rocket	Dakota	Victory	Sheyenne
South-East.....	53.0	52.6	53.6	53.3	54.4
East-Central.....	53.2	52.7	53.8	53.0	54.6
North-East.....	52.8	52.4	53.4	52.6	53.4

Table No. 27. **Sheyenne** outweighed the other varieties. **Dakota** was second, and **Royal** and **Victory** were approximately equal in weight. **Rocket** placed fifth in bushel weight. All varieties graded well, practically 100 percent of the samples grading 1 C.W.

SUMMARIZATION ACCORDING TO AREAS

TABLE NO. 28.—SUMMARIZED RESULTS FOR SOUTH-EASTERN AREA
(9 satisfactory tests)

	Royal	Rocket	Dakota	Victory	Sheyenne
Yield in bushels per acre.....	6.6	7.5	8.6	8.3	7.0
Days from seeding to ripening.....	85.8	88.0	86.6	88.4	84.6
Height of plants in inches.....	18.3	18.4	17.3	18.3	18.7
Bushel weight in pounds.....	53.0	52.6	53.6	53.3	54.4
Commercial grades in percentage: 1 C.W.....	100.0	100.0	100.0	100.0	100.0

Necessary difference—1.7 bushels.

Table No. 28. **Dakota** was high in yield, exceeding Royal in this respect significantly. It failed to outyield any other variety by the difference necessary for significance. **Dakota** was second in weight per measured bushel and was slightly shorter than the other varieties. It is officially recommended for use throughout this area. **Victory** ranked second in yield but was late in ripening. **Rocket** gave an average yield perform-



Left to right: Variety Test Supervisors Donald Colliar, Meota; Blanche Petracek, Esterhazy; and William Miazgar, Fort Qu'Appelle

ance but proved inferior in bushel weight and was slightly late in maturing. **Sheyenne** outweighed the other varieties, and excelled in height and earliness. **Royal** was low in yield and gave an average performance in other characteristics.

TABLE NO. 29.—SUMMARIZED RESULTS FOR EAST-CENTRAL AREA
(7 satisfactory tests)

	Royal	Rocket	Dakota	Victory	Sheyenne
Yield in bushels per acre.....	12.4	12.2	14.1	12.5	12.2
Days from seeding to ripening.....	104.4	102.4	102.6	103.2	102.0
Height of plants in inches.....	21.8	21.2	21.4	21.6	22.2
Bushel weight in pounds.....	53.2	52.7	53.8	53.0	54.6
Commercial grades in percentage:					
1 C.W.....	100.0	100.0	100.0	100.0	100.0

No significant grain yield difference between varieties.

Table No. 29. Yield differences between the varieties were not of a significant nature. **Dakota** placed first in this respect, however, and appeared satisfactory in other characteristics. It is officially recommended for use in this area. **Victory** gave an average performance. **Royal** was late in ripening. **Sheyenne** and **Rocket** were equal in yield. Again, in this area, however, Sheyenne proved superior in bushel weight, height and earliness. Rocket, on the other hand, was shorter than the other varieties and was low in bushel weight.

TABLE NO. 30.—SUMMARIZED RESULTS FOR NORTH-EASTERN AREA
(5 satisfactory tests)

	Royal	Rocket	Dakota	Victory	Sheyenne
Yield in bushels per acre.....	14.8	13.7	16.2	12.8	13.9
Days from seeding to ripening.....	111.0	110.3	110.3	118.0	104.7
Height of plants in inches.....	24.0	24.3	22.3	23.3	23.3
Bushel weight in pounds.....	52.8	52.4	53.4	52.6	53.4
Commercial grades in percentage:					
1 C.W.....	60.0	60.0	60.0	60.0	60.0
2 C.W.....	20.0	20.0	20.0	20.0	40.0
3 C.W.....	20.0	20.0	20.0	20.0	

Necessary difference—2.2 bushels.

Table No. 30. **Dakota** exceeded all varieties in yield, the differences being significant except in the case of Royal. Dakota was short in straw but produced good bushel weight, equalling Sheyenne in this respect. **Royal** was second in yield but failed to outyield any variety significantly. **Sheyenne** ripened almost six days earlier than its nearest rival and outweighed all other varieties except Dakota. The earliness of Sheyenne merits consideration in the choice of a variety for use in this area. **Rocket** excelled in height and equalled Dakota in earliness, but was inferior in bushel weight. **Victory** was low in yield and late in ripening. It showed no outstanding characteristics.



Murray Tatlow of Resource and his variety test

TABLE No. 31
Individual Summarized Results of All Tests—Flax

WHEAT POOL DISTRICT 1

Cereal Variety Zone	Test Sub- dist.	Test desig- nation	Varieties	Yield bus. per acre	Days seed- ing to ripen- ing	Plant height in inches	Pounds per mea- sured bushel	Com- mercial grades	Grading remarks
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ROBERT AND MURRAY GILMER, CARIEVALE

3A	1	1	B	Royal.....	11.5	81	27	53	1 C.W.	—
				Rocket.....	20.6	86	28	53	1 C.W.	—
				Dakota.....	22.6	81	28	55	1 C.W.	—
				Victory.....	20.6	86	31	54	1 C.W.	—
				Sheyenne.....	19.1	80	26	55	1 C.W.	—

Necessary difference—1.7 bushels.

HERMAN A. E. ULRICH, WOODLEY

2A	1	5	B	Royal.....	6.0	—	—	54	1 C.W.	—
				Rocket.....	7.3	—	—	54	1 C.W.	—
				Dakota.....	8.4	—	—	54	1 C.W.	—
				Victory.....	8.9	—	—	54	1 C.W.	—
				Sheyenne.....	5.7	—	—	55	1 C.W.	—

Necessary difference—1.6 bushels.

ARLISS M. SWENSON, MIDALE

2A	1	6	C	Royal.....	2.8	—	—	(A)	(E)	1 C.W.	—
				Rocket.....	1.6	—	—	(A)	(E)	1 C.W.	—
				Dakota.....	1.3	—	—	(A)	(E)	1 C.W.	—
				Victory.....	.7	—	—	(A)	(E)	1 C.W.	—
				Sheyenne.....	1.1	—	—	(A)	(E)	1 C.W.	—

Necessary difference—.5 bushel.

M. ELAINE CARINS, GRIFFIN

2A	1	8	B	Royal.....	7.7	—	18	52	1 C.W.	—
				Rocket.....	6.8	—	19	51	1 C.W.	—
				Dakota.....	5.2	—	13	52	1 C.W.	—
				Victory.....	7.2	—	15	52	1 C.W.	—
				Sheyenne.....	4.8	—	17	53	1 C.W.	—

Necessary difference—1.6 bushels.

Tests discarded on account of damage by drought, pests, hail, or other causes.

3A 1 2 B Harvey Marchand, Storthoaks.

(A)=Insufficient to calculate bushel weight.

(E)=Estimated grade.

WHEAT POOL DISTRICT 2

1A	2	9	D	Royal.....	.7	—	—	(A)	(E)	1 C.W.	—
				Rocket.....	1.1	—	—	(A)	(E)	1 C.W.	—
				Dakota.....	1.2	—	—	(A)	(E)	1 C.W.	—
				Victory.....	1.0	—	—	(A)	(E)	1 C.W.	—
				Sheyenne.....	.8	—	—	(A)	(E)	1 C.W.	—

Samples Bulked.

KENNETH W. LOUCKS, PANGMAN

2A	2	10	B	Royal.....	3.4	87	—	(A)	(E)	1 C.W.	—
				Rocket.....	2.0	91	—	(A)	(E)	1 C.W.	—
				Dakota.....	3.6	87	—	(A)	(E)	1 C.W.	—
				Victory.....	2.2	90	—	(A)	(E)	1 C.W.	—
				Sheyenne.....	1.7	86	—	(A)	(E)	1 C.W.	—

Necessary difference—1.0 bushel.

Tests discarded on account of damage by drought, pests, hail, or other causes.

2A 2 1 B Emilian J. Dedorla, Lake Alma.

(A)=Insufficient to calculate bushel weight.

(E)=Estimated grade.

WHEAT POOL DISTRICT 5

1A	5	6	B	Royal.....	3.3	81	14	(A)	(E)	1 C.W.	—
				Rocket.....	1.4	81	14	(A)	(E)	1 C.W.	—
				Dakota.....	2.8	81	14	(A)	(E)	1 C.W.	—
				Victory.....	2.8	81	14	(A)	(E)	1 C.W.	—
				Sheyenne.....	2.6	75	15	(A)	(E)	1 C.W.	—

Necessary difference—.6 bushel.

(A)=Insufficient to calculate bushel weight.

(E)=Estimated grade.

WHEAT POOL DISTRICT 6

Cereal Variety Zone	Sub-Dist.	Test Dist.	Sub-designation	Varieties	Yield bus. per acre	Days seed-ing to ripen-ing	Plant height in inches	Pounds per measured bushel	Com-mercial grades	Grading remarks
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FRANK SATTLER, MILESTONE

2E	6	3	B	Royal.....	15.2	81	16	53	1 C.W.	—
				Rocket.....	4.0	81	16	49	3 C.W.	—
				Dakota.....	10.1	81	16	53	1 C.W.	—
				Victory.....	8.8	81	16	52	1 C.W.	—
				Sheyenne.....	11.3	82	19	54	1 C.W.	—

Damaged by grasshoppers.

M. DOREEN JEFFERY, BRIERCREST

1A	6	6	B	Royal.....	2.0	—	—	(A)	(E)	1 C.W.
				Rocket.....	1.0	—	—	(A)	(E)	1 C.W.
				Dakota.....	1.9	—	—	(A)	(E)	1 C.W.
				Victory.....	2.3	—	—	(A)	(E)	1 C.W.
				Sheyenne.....	1.7	—	—	(A)	(E)	1 C.W.

Badly damaged by grasshoppers.

RONNIE K. CALLANDER, INDIAN HEAD

3C	6	8	B	Royal.....	8.7	—	—	52	1 C.W.	—
				Rocket.....	7.3	—	—	53	1 C.W.	—
				Dakota.....	6.0	—	—	52	1 C.W.	—
				Victory.....	7.2	—	—	52	1 C.W.	—
				Sheyenne.....	10.5	—	—	55	1 C.W.	—

Samples Incomplete.

ROY W. PEARCE, BRORA

2E	6	10	C	Royal.....	4.2	—	—	(A)	(E)	1 C.W.
				Rocket.....	2.8	—	—	(A)	(E)	1 C.W.
				Dakota.....	3.4	—	—	(A)	(E)	1 C.W.
				Victory.....	3.6	—	—	(A)	(E)	1 C.W.
				Sheyenne.....	2.3	—	—	(A)	(E)	1 C.W.

No significant grain yield difference between varieties.

Tests discarded on account of damage by drought, pests, hail, or other causes.

3C 6 9 B William J. Mlazgar, Fort Qu'Appelle.

(A)=Insufficient to calculate bushel weight.

(E)=Estimated grade.

WHEAT POOL DISTRICT 7

W. TED DENNIS, PARKMAN

3A	7	1	B	Royal.....	3.4	—	—	53	1 C.W.	—
				Rocket.....	9.9	—	—	53	1 C.W.	—
				Dakota.....	13.8	—	—	54	1 C.W.	—
				Victory.....	10.4	—	—	54	1 C.W.	—
				Sheyenne.....	9.6	—	—	54	1 C.W.	—

Royal damaged.

R. B. ROSS CLEMENTS, VANDURA

3A	7	3	B	Royal.....	17.6	99	24	52	1 C.W.	—
				Rocket.....	22.9	101	26	54	1 C.W.	—
				Dakota.....	27.1	103	24	53	1 C.W.	—
				Victory.....	26.6	104	25	53	1 C.W.	—
				Sheyenne.....	23.8	100	27	55	1 C.W.	—

Necessary difference—1.5 bushels.

ALLAN J. THOLL, PEEBLES

3A	7	6	C	Royal.....	11.2	—	16	54	1 C.W.	—
				Rocket.....	5.8	—	15	54	1 C.W.	—
				Dakota.....	10.0	—	15	54	1 C.W.	—
				Victory.....	5.8	—	15	54	1 C.W.	—
				Sheyenne.....	7.8	—	16	55	1 C.W.	—

Damaged by animals.

FRED W. BASELEY, JR., SPY HILL

3B	7	9	C	Royal.....	21.9	107	24	53	1 C.W.	—
				Rocket.....	23.1	106	25	51	1 C.W.	—
				Dakota.....	26.4	105	24	54	1 C.W.	—
				Victory.....	23.5	104	25	54	1 C.W.	—
				Sheyenne.....	21.9	104	25	55	1 C.W.	—

No significant grain yield difference between varieties.

LEROY WENDELL, NEUDORF

3C	7	11	C	Royal.....	20.8	90	23	53	1 C.W.	—
				Rocket.....	20.8	86	22	53	1 C.W.	—
				Dakota.....	22.7	83	22	55	1 C.W.	—
				Victory.....	20.5	88	23	53	1 C.W.	—
				Sheyenne.....	19.1	85	23	54	1 C.W.	—

No significant grain yield difference between varieties.

WHEAT POOL DISTRICT 8

Cereal Variety Zone	Sub-Dist.	Test Dist. nation	Varieties	Yield bush. per acre	Days seed-ing to ripen-ing	Plant height in inches	Pounds per measured bushel	Commercial grades	Grading remarks
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JAMES J. ROONEY, SALTCOATS

3B	8	2	C	Royal.....	8.6	—	—	54	1 C.W.
				Rocket.....	8.6	—	—	54	1 C.W.
				Dakota.....	11.6	—	—	55	1 C.W.
				Victory.....	8.5	—	—	54	1 C.W.
				Sheyenne.....	10.3	—	—	56	1 C.W.

No significant grain yield difference between varieties.

GEORGE E. LAZURKO, WILLOWBROOK

3C	8	4	B	Royal.....	8.2	—	19	54	1 C.W.
				Rocket.....	7.0	—	19	54	1 C.W.
				Dakota.....	7.7	—	20	55	1 C.W.
				Victory.....	7.9	—	20	54	1 C.W.
				Sheyenne.....	7.6	—	22	55	1 C.W.

No significant grain yield difference between varieties.

DONALD BERNDT, VERIGIN

3B	8	5	B	Royal.....	3.3	122	18	54	1 C.W.
				Rocket.....	5.3	118	16	53	1 C.W.
				Dakota.....	5.2	123	17	55	1 C.W.
				Victory.....	4.3	121	15	54	1 C.W.
				Sheyenne.....	4.7	121	17	56	1 C.W.

No significant grain yield difference between varieties.

HENRY W. WASYLYSHYN, GORLITZ

3C	8	6	D	Royal.....	13.0	111	25	53	1 C.W.
				Rocket.....	16.4	111	24	52	1 C.W.
				Dakota.....	16.4	111	24	51	1 C.W.
				Victory.....	17.8	111	25	51	1 C.W.
				Sheyenne.....	12.5	110	24	52	1 C.W.

Damaged by birds.

Tests discarded on account of damage by drought, pests, hail, or other causes.

3B 8 8 C Alvin Sjolie, Sturgis.

WHEAT POOL DISTRICT 9

D. GLEN SMITH, GOVAN									
2B	9	5	C	Royal.....	11.1	—	—	53	1 C.W.
				Rocket.....	8.6	—	—	52	1 C.W.
				Dakota.....	12.2	—	—	54	1 C.W.
				Victory.....	10.1	—	—	53	1 C.W.
				Sheyenne.....	8.8	—	—	54	1 C.W.

Necessary difference—1.4 bushels.

RUDOLF R. STUIKE, JANSEN

3C	9	8	B	Royal.....	13.0	92	—	53	1 C.W.
				Rocket.....	12.3	91	—	52	1 C.W.
				Dakota.....	12.9	91	—	53	1 C.W.
				Victory.....	12.7	92	—	52	1 C.W.
				Sheyenne.....	13.0	90	—	54	1 C.W.

No significant grain yield difference between varieties.

Tests discarded on account of damage by drought, pests, hail, or other causes.

3C 9 1 C Wilma Eyre, Ituna.
2B 9 6 C Robert W. Kirk, Nokomis.

WHEAT POOL DISTRICT 11

GWEN M. STRUTT, BROCK									
2F	11	6	B	Royal.....	3.3	—	—	(A)	(E) 1 C.W.
				Rocket.....	2.5	—	—	(A)	(E) 1 C.W.
				Dakota.....	2.6	—	—	(A)	(E) 1 C.W.
				Victory.....	2.1	—	—	(A)	(E) 1 C.W.
				Sheyenne.....	1.7	—	—	(A)	(E) 1 C.W.

No significant grain yield difference between varieties.

Wheat Pool District 11—Continued

Cereal Variety Zone	Sub-Dist.	Test Dist. nation	Varieties	Yield bus. per acre	Days seed-ing to ripen-ing	Plant height in inches	Pounds per measured bushel	Com-mercial grades	Grading remarks
HENRY P. WICHERT, FISKE									
1A	11	8	C	Royal.....	3.0	—	13	(A)	(E) 1 C.W. —
				Rocket.....	3.2	—	11	(A)	(E) 1 C.W. —
				Dakota.....	2.2	—	11	(A)	(E) 1 C.W. —
				Victory.....	2.9	—	12	(A)	(E) 1 C.W. —
				Sheyenne.....	1.6	—	11	(A)	(E) 1 C.W. —

Damaged by grasshoppers.

Tests discarded on account of damage by drought, pests, hail, or other causes.

1A 11 1 C Donald F. Pittman, Kyle.

(A)=Insufficient to calculate bushel weight.

(E)=Estimated grade.

WHEAT POOL DISTRICT 14

VERNON STROM, WADENA

3B	14	2	C	Royal.....	17.5	—	—	53	1 C.W. —
				Rocket.....	15.4	—	—	51	1 C.W. —
				Dakota.....	18.4	—	—	53	1 C.W. —
				Victory.....	9.1	—	—	52	1 C.W. —
				Sheyenne.....	15.8	—	—	53	1 C.W. —

Necessary difference—2.1 bushels.

LEONARD T. SIGFRID, NORA

3B	14	4	D	Royal.....	28.9	106	28	54	1 C.W. —
				Rocket.....	26.6	108	29	55	1 C.W. —
				Dakota.....	29.6	108	26	55	1 C.W. —
				Victory.....	25.7	111	28	54	1 C.W. —
				Sheyenne.....	27.6	100	28	55	1 C.W. —

No significant grain yield difference between varieties.

HAROLD E. WALL, CARROT RIVER

3F	14	11	C	Royal.....	5.6	113	22	50	2 C.W. —
				Rocket.....	7.2	109	22	50	2 C.W. —
				Dakota.....	4.6	109	19	49	3 C.W. —
				Victory.....	7.1	111	22	51	2 C.W. F.
				Sheyenne.....	5.3	106	18	51	2 C.W. F.

Yields not included in zone analysis.

Tests discarded on account of damage by drought, pests, hail, or other causes.

3F 14 7 C Alvin W. Thomas, Tisdale.

WHEAT POOL DISTRICT 15

ROBERT K. GOSSEN, HEPBURN

3G	15	4	B	Royal.....	9.0	—	—	53	2 C.W. D., G.
				Rocket.....	10.2	—	—	52	2 C.W. D., G.
				Dakota.....	9.2	—	—	52	2 C.W. D., G.
				Victory.....	11.3	—	—	52	2 C.W. D., G.
				Sheyenne.....	8.3	—	—	52	2 C.W. D., G.

No significant grain yield difference between varieties.

ELMER PACZAY, PADDOCKWOOD

4A	15	9	C	Royal.....	4.8	114	22	52	3 C.W. F. G.
				Rocket.....	4.6	114	22	52	3 C.W. F. G.
				Dakota.....	5.7	114	22	54	3 C.W. F. G.
				Victory.....	5.0	132	20	52	3 C.W. F. G.
				Sheyenne.....	5.3	108	24	54	2 C.W. F.

No significant grain yield difference between varieties.

ALBERT P. MOLLISON, GARRICK

3F	15	11	C	Royal.....	13.6	—	—	52	1 C.W. —
				Rocket.....	11.9	—	—	52	1 C.W. —
				Dakota.....	18.3	—	—	53	1 C.W. —
				Victory.....	12.9	—	—	53	1 C.W. —
				Sheyenne.....	12.7	—	—	53	1 C.W. —

Necessary difference—2.3 bushels.

CROP COMPARISON TESTS

For the second successive year, a crop comparison project was conducted in 1949 using Thatcher wheat, Fortune oats, Montcalm barley and Dakota flax. It was undertaken in an effort to demonstrate the general relationship of the crops on a cash value per acre basis when seeded under identical conditions. The project involved 94 tests distributed throughout most of the grain growing area of the province. Only a few tests were carried out in the south-western and central areas, however, and practically all of these were destroyed by grasshoppers and drought before the grain reached maturity. Thus, although some very interesting information was provided during the early stages of growth, the tests in Zones 1A, 1B, 1C and 2C failed to provide any information regarding yields and cash values on a zone basis.

Several important factors must be kept in mind when studying the results of this project. One such factor is price fluctuation. The prices used in determining the cash value relationship in this test were the average cash prices for the month of September, 1949, basis Fort William-Port Arthur, in the case of oats, barley and flax, and the Canadian Wheat Board initial payment for wheat effective during the period. **It should be stressed, therefore, that the information contained in the cash values table applies only to the month of September, 1949, and the relationships will change with every price fluctuation.**

It should be kept in mind also that field crops will not bear the same yield relationship in any district from year to year. Weather conditions will influence the crops, as will changes in the insect population, plant diseases, general growing conditions and other factors.

While cash value is a primary consideration in the choice of a crop, feed requirements and proper rotations must also be considered. In view of these various factors it is an obvious conclusion that the results of any crop comparison test should be used only for general information and demonstration purposes. The information from these tests should be used only when past experience or the results of similar tests over a period of years are available for comparison.

It will be observed in the following tables that the cash values and average yields are somewhat higher than those usually obtained under field conditions. It is true that every effort is made in scientific variety testing to duplicate actual field conditions, but factors such as the better preparation of the seed bed, the use of top quality seed in all cases, and the exclusion of badly damaged tests from the average results tend to produce higher yields in the zone summaries than would normally be expected under ordinary farm conditions. It must be stressed, however, that the actual yield in a test of this nature is not in itself important. The important thing is the relationship between the performances of the different crops.

DESCRIPTION OF VARIETIES

Thatcher wheat—(See page 9).

Fortune oats is a new variety developed at the University of Saskatchewan from the cross Victory X V.R.M.V. The latter strain was originated by the United States Department of Agriculture, from the double cross (Victoria X Richland) X (Markton X Victory). Fortune is resistant to smut and has stem rust resistance similar to that of Exeter. Fortune was tested in 1947 under the designation V.C. 30.

Montcalm barley is a six-rowed, smooth-awned blue seeded variety which resembles O.A.C. 21 in many respects. It was produced at MacDonald College, Quebec, by Professor E. A. Lods from the cross Black Barbless X a blue Manchurian selection. Montcalm is a high quality malting variety eligible for grade 1 C.W. 6-row. It is susceptible to rusts and smuts.

Dakota flax was developed by the United States Department of Agriculture and the North Dakota Agricultural Experiment Station from the cross Renew X Bison. It is resistant to rust and wilt. Dakota has blue blossoms, and medium sized brown seeds which produce good quality oil.

TABLE NO. 32.—AVERAGE COMPARATIVE CASH VALUES PER ACRE OF FOUR CROPS
SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	No. of Satisfactory Tests	Thatcher Wheat	Fortune Oats	Montcalm Barley	Dakota Flax
2A & 2E.....	3	\$19.56	\$19.90	\$31.07	19.11
2B & 2D.....	5	39.13	35.40	52.76	26.53
3A.....	2	36.08	41.66	62.87	31.79
3B.....	11	53.27	62.74	89.93	50.11
3C.....	4	51.36	50.27	78.52	38.95
3E.....	4	32.61	29.47	50.55	25.35
3F.....	3	74.42	82.95	131.18	68.60
3G & 3H.....	2	45.35	39.52	61.85	28.67
4A & 4B.....	6	71.13	60.98	85.89	48.88

NOTE.—The comparative cash values were computed using the average cash prices for the month of September, 1949, basis in store Fort William—Port Arthur, in the case of oats, barley and flax and the Canadian Wheat Board initial price for wheat. The prices used were: Wheat 1 Northern—\$1.75 per bushel; Oats—2 C.W.—77½ cents per bushel; Barley—1 C.W. 6 Row—\$1.51½ per bushel; Flax—1 C.W.—\$3.67½ per bushel.

CASH VALUE PER ACRE

Table No. 32. It must be stressed that the cash values given in Table No. 32 apply only to the month of September, 1949. As mentioned previously, market fluctuations from day to day change the values, and even as this book goes to press the value relationship of the crops has altered. On the basis of average prices for September, however, **Montcalm** barley appeared to have a definite cash value advantage over the other varieties in the test. It exceeded all other varieties in all zones. **Thatcher** wheat placed second on an average basis but was followed closely by **Fortune**. Thatcher proved superior in value to Fortune in Zones 2B and 2D, 3C, 3E, 3G and 3H, and 4A and 4B. In 2A and 2E these two varieties were practically equal in value, but Fortune exceeded Thatcher in the extreme eastern Zones 3A, 3B, and 3F. **Dakota** flax produced relatively low yields in all areas and ranked fourth in cash value.

TABLE NO. 33.—AVERAGE YIELDS IN BUSHELS PER ACRE
(2 years)
SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Thatcher Wheat		Fortune Oats		Montcalm Barley		Dakota Flax	
	1948	1949	1948	1949	1948	1949	1948	1949
2A & 2E.....	—	11.5	—	26.4	—	21.1	—	5.2
2B & 2D.....	—	23.0	—	45.7	—	35.7	—	7.2
3A.....	30.5	20.8	60.4	53.8	43.2	41.5	19.2	8.7
3B.....	38.6	30.8	67.2	81.7	53.3	59.4	14.6	13.6
3C.....	30.9	29.8	72.3	65.5	58.2	52.0	17.6	10.6
3E.....	14.3	18.8	22.6	39.0	16.2	33.6	6.9	6.9
3F.....	33.6	43.2	77.7	108.5	63.9	87.0	17.4	18.8
3G & 3H.....	25.7	26.2	40.8	51.0	34.6	40.7	14.2	7.8
4A & 4B.....	39.8	41.3	80.1	79.9	58.3	56.9	16.3	13.4

COMPARATIVE GRAIN YIELD IN BUSHELS PER ACRE

Table No. 33. During each of the past two years **Fortune** oats outyielded all other varieties in every zone. **Montcalm** barley placed second with **Thatcher** wheat third and **Dakota** flax fourth. The yield performances of Fortune and Montcalm in 1949 showed considerable improvement over the previous year when considered on a percentage of Thatcher basis. Dakota, however, yielded somewhat less in comparison to Thatcher in 1949 than it did in 1948.

GENERAL CHARACTERISTICS

A comparison of the average number of days from seeding to ripening in the 1949 tests shows the following results: Montcalm barley—99 days, Fortune oats—99.2 days, Thatcher wheat—101.8 days, Dakota flax—112.4 days.

Fortune oats led in height at 33.0 inches, Montcalm barley—32.1 inches, Thatcher wheat—30.6 inches, Dakota flax—19.7 inches.

GENERAL CONCLUSIONS

The uncertainty of flax as a cash crop was demonstrated in the tests conducted during 1949. **Dakota** dropped to fourth place in cash value after having led the other crops in 1948. This violent change was caused by both reduced prices and reduced yields. The September average price for flax in 1949 was approximately 40 cents below that of 1948, and flax yields were down throughout the entire province.

Montcalm barley excelled in cash value during 1949. In 1948 it placed third, slightly below Thatcher on an average basis. Compared to the other varieties, coarse grains produced better yield results in 1949 than in 1948, and this, combined with unusually high prices for barley, has given Montcalm a definite value advantage. **Thatcher** wheat placed second in these tests both in 1948 and 1949. The September price for wheat was the same in both years, while coarse grains prices were higher in 1949. **Fortune** placed third in value in 1949 and fourth in 1948. Due to higher comparative yields in 1949, Fortune almost equalled Thatcher in value.

As stated previously, feed requirements and crop rotations are factors to be considered in the choice of a crop. In a series of feed-yield tests conducted by the Saskatchewan Wheat Pool in 1941 and 1942, it was found that barley averaged almost 50 percent more than oats in western feed units per acre. Similar results were obtained at the University of Saskatchewan in a four-year experiment (1936-1939). Wheat was found to be almost equal to barley in western feed units per acre. Thus it would appear that general agreement is found in the results, with wheat and barley exceeding oats in both cash value and feed value.

In the southwestern zones of the province, damage by drought and grasshoppers was so widespread that many tests were abandoned and those remaining were damaged. Accurate zone averages for cash value and yield could not be obtained but several interesting observations were made. Grasshopper damage was reported to be very severe in the Montcalm variety. Dakota and Fortune were damaged to a lesser extent but Thatcher appeared to suffer the least from these pests. Similarly, Thatcher appeared to withstand drought conditions to a greater extent than the other varieties.

Table No. 34

Individual Summarized Results of Crop Comparison Tests

WHEAT POOL DISTRICT 1

Cereal Variety Zone	Sub. Dist.	Test Designation	Varieties	Yield Bushels per Acre	Cash Value per Acre	Days Seeding to Ripening	Plant Height in Inches	Pounds per Measured Bushel	Commercial Grades	Grading Remarks
MICHAEL BARTOLF, OXBOW										
3A.....	1	3	B Thatcher wheat....	21.5	\$ 36.98	101	33	61	2 Nor.	Bl., I.
			Fortune oats.....	44.9	34.80	98	36	41	1 C.W.	—
			Montcalm barley..	42.1	63.78	100	30	52	1 C.W. 6R.	—
			Dakota flax.....	3.0	11.02	109	18	54	1 C.W.	—

ALBERT K. KING, FROBISHER										
3A.....	1	4	B Thatcher wheat....	28.8	\$47.52	—	—	59	4 Nor.	D., I.
			Fortune oats.....	89.9	66.08	—	—	37	1 Feed	Dcl.
			Montcalm barley..	61.9	83.56	—	—	45	2 Feed	—
			Dakota flax.....	—	—	—	—	—	—	—

Samples incomplete.

ELMER L. OLIVER, COLGATE										
2A.....	1	7	A Thatcher wheat....	7.8	\$13.65	—	—	62	1 Nor.	—
			Fortune oats.....	8.4	6.26	—	—	37	3 C.W.	G.
			Montcalm barley..	5.7	8.52	—	—	47	3 C.W. 6R.	—
			Dakota flax.....	2.4	8.82	—	—	54	1 C.W.	—

Damaged by hail.

LESLIE M. C. BROCK, WORDSWORTH										
3A.....	1	10	B Thatcher wheat....	20.1	\$ 35.17	100	34	62	1 Nor.	—
			Fortune oats.....	62.6	48.51	104	36	40	2 C.W.	S.G.
			Montcalm barley..	40.9	61.96	97	33	50	1 C.W. 6R.	—
			Dakota flax.....	14.3	52.55	116	21	57	1 C.W.	—

Tests discarded on account of damage by drought, pests, hail, or other causes

2A..... 1 6 B Franklin E. Frijouf, Macoun.

WHEAT POOL DISTRICT 2

DONALD Z. MONTGOMERY, WILLOW BUNCH										
1A.....	2	4	A Thatcher wheat....	10.1	\$ 17.68	93	20	60	1 Nor.	—
			Fortune oats.....	9.4	7.28	89	21	39	2 C.W.	S.G.
			Montcalm barley..	—	—	—	—	—	—	—
			Dakota flax.....	—	—	—	—	—	—	—

Montcalm and Dakota destroyed by grasshoppers.

MAURICE R. VERHELST, LAFLECHE										
1A.....	2	6	C Thatcher wheat....	7.4	\$ 12.95	91	23	61	1 Nor.	—
			Fortune oats.....	17.5	13.56	93	26	39	1 C.W.	—
			Montcalm barley..	4.8	7.18	92	22	47	3 C.W. 6R.	—
			Dakota flax.....	.2	.73	94	18	(A)	(E) 1 C.W.	—

Montcalm and Dakota badly damaged by grasshoppers.

WAYNE A. LOWES, ASSINIBOIA										
1A.....	2	8	B Thatcher wheat....	5.3	\$ 9.27	99	9	60	1 Nor.	—
			Fortune oats.....	9.1	7.05	95	9	40	1 C.W.	—
			Montcalm barley..	—	—	96	9	—	—	—
			Dakota flax.....	1.7	6.25	99	9	54	1 C.W.	—

Badly damaged by grasshoppers.

NOREEN L. HALS, BENGOUGH										
1A.....	2	9	C Thatcher wheat....	14.9	\$ 26.07	92	21	63	1 Nor.	—
			Fortune oats.....	20.5	15.89	83	25	38	2 C.W.	S.G.
			Montcalm barley..	10.5	15.91	83	23	48	2 C.W. 6R.	—
			Dakota flax.....	1.0	3.67	99	18	(A)	(E) 1 C.W.	—

Considerable grasshopper damage.

Tests discarded on account of damage by drought, pests, hail, or other causes.

1A..... 2 3 B Martin Wrolson, Harptree.

(A)—Insufficient to calculate bushel weight.

(E)—Estimated grade.

WHEAT POOL DISTRICT 4

Tests discarded on account of damage by drought, pests, hail, or other causes.										
1B.....	4	7	B Clarence Albrecht, Linacre.	—	—	—	—	—	—	—
1A.....	4	10	B Don McL. Anderson, Hazlet.	—	—	—	—	—	—	—

WHEAT POOL DISTRICT 5

Cereal Variety Zone	Sub. Dist.	Test Designa- tion	Varieties	Yield Bushels per Acre	Cash Value per Acre	Days Seeding to Ripening	Plant Height in Inches	Pounds per Measured Bushel	Commercial Grades	Grading Remarks
STEWART R. NOBLE, MITCHELLTON										
1B.....	5	1	B	Thatcher wheat....	15.8	\$ 24.49	—	—	57	No. 5
				Fortune oats.....	19.6	14.01	—	—	32	2 Feed
				Montcalm barley..	28.0	37.94	—	—	46	1 Feed
				Dakota flax.....	3.2	10.94	—	—	54	3 C.W.
Damaged by grasshoppers.										
VERNON OEHLERKING, GRAVELBOURG										
1A.....	5	2	B	Thatcher wheat....	1.6	\$ 2.80	—	—	60	1 Nor.
				Fortune oats.....	1.5	1.12	—	—	(A)	(E) 3 C.W.
				Montcalm barley..	.4	.54	—	—	(A)	(E) 1 Feed
				Dakota flax.....	.7	2.57	—	—	(A)	(E) 1 C.W.
Badly damaged by grasshoppers.										
LEONA B. VEER, WALDECK										
1A.....	5	4	B	Thatcher wheat....	7.8	\$ 13.42	105	—	58	2 Nor.
				Fortune oats.....	4.6	3.56	89	—	36	2 C.W.
				Montcalm barley..	—	—	—	—	—	—
				Dakota flax.....	—	—	—	—	—	—
Montcalm and Dakota destroyed by grasshoppers.										
CHARLES E. ELSOM, BOHARM										
2E.....	5	7	C	Thatcher wheat....	8.2	\$ 14.35	93	19	60	1 Nor.
				Fortune oats.....	20.7	16.04	93	20	39	1 C.W.
				Montcalm barley..	16.2	24.22	93	19	47	3 C.W. 6R.
	6			Dakota flax.....	3.7	13.60	96	17	54	1 C.W.

Tests discarded on account of damage by drought, pests, hail, or other causes.

1A..... 5 6 A Denis E. Gagnon, Coderre.

(A)—Insufficient to calculate bushel weight.

(E)—Estimated grade.

WHEAT POOL DISTRICT 6										
DALTON G. HOCKLEY, YELLOW GRASS										
2E.....	6	1	B	Thatcher wheat....	18.6	\$ 31.62	82	20	59	3 Nor.
				Fortune oats.....	37.3	27.79	77	28	37	3 C.W.
				Montcalm barley..	31.5	47.72	75	25	48	2 C.W. 6R.
				Dakota flax.....	6.6	24.25	96	18	53	1 C.W.
EDWARD C. WILD, ODESSA										
2A.....	6	2	C	Thatcher wheat....	10.0	\$ 17.00	102	17	61	3 Nor.
				Fortune oats.....	19.2	13.73	94	24	37	2 Feed
				Montcalm barley..	6.1	9.24	107	19	48	2 C.W. 6R.
				Dakota flax.....	5.0	18.37	115	16	53	1 C.W.
Montcalm badly damaged by grasshoppers.										
ARNOLD R. FILAZEK, SPRING VALLEY										
1A.....	6	4	A	Thatcher wheat....	9.7	\$ 16.97	74	16	61	1 Nor.
				Fortune Oats.....	16.4	12.22	72	20	35	3 C.W.
				Montcalm barley..	3.5	5.23	73	15	46	3 C.W. 6R.
				Dakota flax.....	2.1	7.72	78	18	53	1 C.W.
Montcalm and Dakota badly damaged by grasshoppers.										

PATRICIA JONES, BAILDON										
1A.....	6	5	B	Thatcher wheat....	—	—	86	14	—	—
				Fortune oats.....	—	—	89	20	—	—
				Montcalm barley..	—	—	88	15	—	—
				Dakota flax.....	.7	2.57	87	16	(A)	(E) 1 C.W.
Thatcher, Fortune and Montcalm destroyed by grasshoppers.										
ROBERT PITTENDRIGH, ZEHNER										
2E.....	6	7	B	Thatcher wheat....	13.0	\$ 22.75	97	25	63	1 Nor.
				Fortune oats.....	14.4	11.16	93	22	39	2 C.W.
				Montcalm barley..	21.2	32.12	96	24	51	1 C.W. 6R.
				Dakota flax.....	1.3	4.78	112	12	(A)	(E) 1 C.W.
Damaged by shattering and grasshoppers.										

(A)—Insufficient to calculate bushel weight.

(E)—Estimated grade.

WHEAT POOL DISTRICT 7										
ELVIN T. AXTEN, MOOSOMIN										
3B.....	7	2	B	Thatcher wheat....	24.4	\$ 41.48	94	40	58	3 Nor.
				Fortune oats.....	88.9	68.90	92	46	38	2 C.W.
				Montcalm barley..	61.2	92.72	94	41	49	2 C.W. 6R.
				Dakota flax.....	22.7	83.42	108	25	54	1 C.W.

Wheat Pool District 7—Continued

Cereal Variety Zone	Sub. Dist.	Test Designation	Varieties	Yield Bushels per Acre	Cash Value per Acre	Days Seeding to Ripening	Plant Height in Inches	Pounds per Measured Bushel	Commercial Grades	Grading Remarks
JAMES A. CARNEGIE, CREELMAN										
2A.....	7	5	B Thatcher wheat....	7.7	\$ 12.70	91	14	56	4 Nor.	—
			Fortune oats.....	21.3	15.87	103	22	39	3 C.W.	G.
			Montcalm barley..	15.7	21.27	99	19	50	1 Feed	G., Pl.
			Dakota flax.....	5.3	19.48	121	13	51	1 C.W.	—
JOSEPH ERZA, CANDIAC										
3A.....	7	6	B Thatcher wheat....	37.2	\$ 65.10	104	43	60	1 Nor.	—
			Fortune oats.....	65.3	50.61	100	46	37	2 C.W.	—
			Montcalm barley..	68.4	103.62	95	40	51	1 C.W. 6R.	—
			Dakota flax.....	19.9	73.13	116	23	53	1 C.W.	—
Fortune damaged by gophers.										
ROBERT J. ARCHER, BROADVIEW										
3A.....	7	7	B Thatcher wheat....	7.0	\$ 11.55	85	—	56	4 Nor.	—
			Fortune oats.....	—	—	—	—	—	—	—
			Montcalm barley..	—	—	—	—	—	—	—
			Dakota flax.....	4.2	15.43	93	—	52	1 C.W.	—
Badly damaged by livestock.										
ROSS JOHNSON, WHITEWOOD										
3C.....	7	8	B Thatcher wheat....	22.3	\$ 38.36	—	—	60	2 Nor.	I.
			Fortune oats.....	70.9	54.95	—	—	40	2 C.W.	S.G.
			Montcalm barley..	55.2	83.63	—	—	52	2 C.W. 6R.	W.S.
			Dakota flax.....	3.8	13.96	—	—	52	1 C.W.	—
JOHN E. CROSWELL, STOCKHOLM										
3C.....	7	10	B Thatcher wheat....	34.7	\$ 59.68	97	32	61	2 Nor.	I.
			Fortune oats.....	65.6	50.84	97	34	38	1 C.W.	—
			Montcalm barley..	74.7	113.17	95	32	51	1 C.W. 6R.	—
			Dakota flax.....	—	—	—	—	—	—	—
Flax destroyed by livestock.										
GEORGE AND EDDIE KONOWAL, LEMBERG										
3C.....	7	11	B Thatcher wheat....	38.1	\$ 65.53	—	33	62	2 Nor.	I.
			Fortune oats.....	79.6	61.69	—	35	39	2 C.W.	S.G.
			Montcalm barley..	70.9	107.41	—	34	51	1 C.W. 6R.	—
			Dakota flax.....	20.5	75.34	—	23	55	1 C.W.	—

Tests discarded on account of damage by drought, pests, hail, or other causes.

3A..... 7 4 B Richard J. Santo, Bender.

WHEAT POOL DISTRICT 8

MALCOLM ADAMS, McNUTT										
3B.....	8	1	A Thatcher wheat....	7.7	\$ 12.70	—	—	53	4 Sp.	—
			Fortune oats.....	38.1	29.53	—	—	41	2 C.W.	S.G.
			Montcalm barley..	27.9	41.71	—	—	50	3 C.W. 6R.	G.
Samples incomplete.										
WALTER H. LUMB, DUFF										
3C.....	8	3	C Thatcher wheat....	35.2	\$ 61.60	98	30	64	1 Nor.	—
			Fortune oats.....	64.3	49.83	101	36	41	1 C.W.	—
			Montcalm barley..	45.1	68.33	94	26	51	1 C.W. 6R.	—
			Dakota flax.....	10.7	39.32	120	15	56	1 C.W.	—
BILL SAMCHUK, RAMA										
3B.....	8	7	B Thatcher wheat....	16.7	\$ 28.39	111	33	58	3 Nor.	I.
			Fortune oats.....	74.7	57.89	107	37	39	1 C.W.	—
			Montcalm barley..	42.8	64.84	112	39	51	2 C.W. 6R.	W.S.
			Dakota flax.....	10.2	37.48	116	23	53	1 C.W.	—
EDWARD G. TUNBRIDGE, PREECEVILLE										
3B.....	8	8	D Thatcher wheat...	45.9	\$ 80.32	—	—	64	1 Nor.	—
			Fortune oats.....	95.5	74.01	—	—	38	1 C.W.	—
			Montcalm barley..	69.0	104.53	—	—	51	1 C.W. 6R.	—
			Dakota flax.....	16.7	61.37	—	—	57	1 C.W.	—
LEVENTINE S. OCHITWA, NORQUAY										
3B.....	8	9	B Thatcher wheat...	42.4	\$ 72.93	91	36	60	2 Nor.	I.
			Fortune oats.....	122.9	91.56	94	42	36	3 C.W.	G.
			Montcalm barley..	92.9	140.74	89	36	50	2 C.W. 6R.	W.S.
			Dakota flax.....	20.5	75.34	108	18	55	1 C.W.	—

Wheat Pool District 8—Continued

Cereal Variety Zone	Sub. Dist.	Test Designation	Varieties	Yield Bushels per Acre	Cash Value per Acre	Days Seeding to Ripening	Plant Height in Inches	Pounds per Measured Bushel	Commercial Grades	Grading Remarks
ALEX SAVENKOFF, PELLY										
3B.....	8	10	B Thatcher wheat....	—	\$—	97	34	—	1 C.W.	—
			Fortune oats.....	92.3	71.53	91	42	39	3 C.W. 6R.	Dcl.
			Montcalm barley..	61.8	92.39	95	36	50	2 C.W.	G.
			Dakota flax.....	13.1	47.49	122	19	54	1 C.W.	—

Thatcher destroyed by livestock.

3B..... 8 6 C Tests discarded on account of damage by drought, pests, hail, or other causes. Walter Latta, Canora.

WHEAT POOL DISTRICT 9

EDWARD J. FEIGEL, DYSART										
3C.....	9	2	A Thatcher wheat....	8.9	\$ 15.31	92	26	63	2 Nor.	I.
			Fortune oats.....	—	—	—	—	—	—	—
			Montcalm barley..	13.1	19.58	96	24	49	3 C.W. 6R.	G.
			Dakota flax.....	—	—	98	10	—	—	—

Fortune and Dakota destroyed by grasshoppers and birds.

ERNEST ORBAN, PUNNICHY										
3C.....	9	3	B Thatcher wheat....	18.0	\$30.96	114	33	59	2 Nor.	—
			Fortune oats.....	—	—	117	35	—	—	—
			Montcalm barley..	57.8	87.57	114	28	52	2 C.W. 6R.	Dcl.
			Dakota flax.....	6.8	24.99	123	26	54	1 C.W.	—

Fortune destroyed by livestock.

GEORGE H. HERBER, DUVAL										
3C.....	9	5	B Thatcher wheat....	11.9	\$20.47	100	24	59	2 Nor.	—
			Fortune oats.....	—	—	—	—	—	—	—
			Montcalm barley..	17.0	25.41	95	21	47	3 C.W. 6R.	—
			Dakota flax.....	—	—	—	—	—	—	—

Fortune and Dakota destroyed.

LAURENCE E. BARTEL, DRAKE										
2B.....	9	6	B Thatcher wheat....	39.8	\$ 65.67	—	—	62	4 Nor.	Bl., D., I
			Fortune oats.....	75.1	58.20	—	—	38	2 C.W.	St.
			Montcalm barley..	56.7	85.90	—	—	50	2 C.W. 6R.	St.
			Dakota flax.....	11.1	40.79	—	—	53	1 C.W.	—

Dakota destroyed by birds.

BILLY D. KELLS, ELFROS										
3C.....	9	10	B Thatcher wheat....	14.0	\$ 24.08	102	26	59	2 Nor.	—
			Fortune oats.....	58.0	44.95	101	31	39	2 C.W.	S.G.
			Montcalm barley..	27.6	41.81	98	26	48	2 C.W. 6R.	—
			Dakota flax.....	—	—	123	12	—	—	—

Montcalm badly damaged by grasshoppers.

DANIEL BALL, DILKE										
2B.....	10	1	D Thatcher wheat....	21.9	\$ 38.32	100	33	63	1 Nor.	—
			Fortune oats.....	39.4	30.53	98	32	40	1 C.W.	—
			Montcalm barley..	6.2	9.39	99	32	49	2 C.W. 6R.	—
			Dakota flax.....	.7	2.57	99	14	(A)	(E) 1 C.W.	—

Montcalm badly damaged by grasshoppers.

JAMES S. WILSON, PENDZANCE										
2B.....	10	1	E Thatcher wheat....	16.9	\$ 29.57	98	30	60	1 Nor.	—
			Fortune oats.....	—	—	92	28	—	—	—
			Montcalm barley..	—	—	88	34	—	—	—
			Dakota flax.....	—	—	98	18	—	—	—

Fortune, Montcalm and Dakota destroyed by grasshoppers.

GORDON J. MEADEN, BEECHY										
1A.....	10	3	A Thatcher wheat....	4.1	\$ 7.05	78	11	59	2 Nor.	—
			Fortune oats.....	5.9	4.40	81	11	35	3 C.W.	—
			Montcalm barley..	—	—	—	—	—	—	—
			Dakota flax.....	1.2	4.41	83	8	(A)	(E) 1 C.W.	—

Montcalm destroyed by grasshoppers.

O. GORDON SILVERTHORN, ARDATH										
2B.....	10	5	B Thatcher wheat....	8.5	\$14.45	113	18	57	3 Nor.	—
			Fortune oats.....	10.7	8.29	103	22	38	2 C.W.	S.G.
			Montcalm barley..	16.7	25.30	103	19	50	1 C.W. 6R.	—
			Dakota flax.....	6.6	24.25	117	20	54	1 C.W.	—

Fortune and Montcalm damaged by grasshoppers.

Wheat Pool District 10—Continued

Cereal Variety Zone	Sub. Dist.	Test Designation	Varieties	Yield Bushels per Acre	Cash Value per Acre	Days Seeding to Ripening	Plant Height in Inches	Pounds per Measured Bushel	Commercial Grades	Grading Remarks
NORMAN CALLAWAY, DAVIDSON										
2B.....	10	7	C	Thatcher wheat....	16.3	\$ 28.04	118	27	59	2 Nor.
				Fortune oats.....	5.2	3.87	114	22	36	3 C.W.
				Montcalm barley..	6.7	8.81	115	23	40	3 Feed
				Total.....						G.

Dakota destroyed by frost. Fortune and Montcalm badly damaged by grasshoppers.

Dakota destroyed. Montcalm badly damaged by grasshoppers.

WALTER J. ANDERSON, SWANSON											
2B.....	10	10	C	Thatcher wheat.....	23.7	\$40.76	110	29	60	2 Nor.	Bl.
				Fortune oats.....	54.7	42.39	112	34	41	1 C. W.	—
				Montcalm barley..	38.5	58.33	104	26	50	1 C.W.	—
				Dakota flax.....	11.0	40.42	119	17	54	1 C.W.	—

Tests discarded on account of damage by drought, pests, hail, or other causes.

2B..... 10 9 B Alan L. Haight, Hanley
(A)—Insufficient to calculate bushel weight.

WHEAT POOL DISTRICT 11

HAROLD W. HEATH, KYLE												
1A.....	11	1	B	Thatcher wheat.....	10.3	\$ 18.02	—	—	—	62	1 Nor.	—
				Fortune oats.....	14.7	10.95	—	—	—	38	3 C.W.	G.
				Montcalm barley..	6.3	9.54	—	—	—	48	2 C.W.	6R.
				Dakota Flax.....	2.8	10.29	—	—	—	53	1 C.W.	—

Tests discarded on account of damage by drought, pests, hail, or other causes.

2F..... 11 2 B John G. Jagow, Elrose.
1A..... 11 8 B J. Esther Barrett, Fiske.

WHEAT POOL DISTRICT 12

				PHYLLIS M. POTTER, BIGGAR							
2D.....	12	1	B	Thatcher wheat....	14.1	\$ 24.67	—	19	64	1 Nor.	—
				Fortune oats.....	24.5	18.99	—	23	38	2 C.W.	S.G.
				Montcalm barley..	13.2	20.00	—	17	48	2 C.W.	6R.
				Dakota flax.....	—	—	—	13	—	—	—

Dakota destroyed

Damaged by grasshoppers.

				TONY A. BARTH, TAKO					
2D.....	12	5	B	Thatcher wheat.....	25.9	\$ 45.32	—	—	63
				Fortune oats.....	41.7	32.32	—	—	40
				Montcalm barley.....	41.4	62.72	—	—	51
				Dakota flax.....	2.4	8.82	—	—	52
								1 Nor.	—
								1 C.W.	—
								1 C.W. 6R.	—
								1 C.W.	—

2D 12 5 C T

3E..... 12 8 C T

Fortune oats.....	29.5	21.98	89	25	58	3 C.W.	G.				
Montcalm barley..	23.9	36.21	94	35	51	1 C.W.	6R.				
Dakota flax.....	5.4	19.84	100	20	52	1 C.W.	—				
ROBERT R. KNOWLES, ROCKHAVEN											
3E.....	12	9	C	Thatcher wheat....	14.2	\$ 24.85	107	24	63	1 Nor.	—
				Fortune oats.....	21.3	24.26	104	26	41	2 C.W.	—

Wheat Pool District 12—Continued

Cereal Variety Zone	Sub. Dist.	Test Sub. Dist.	Design- nation	Varieties	Yield Bushels per Acre	Cash Value per Acre	Days Seeding to Ripening	Plant Height in Inches	Pounds per Meas- ured Bushel	Commercial Grades		Grading Remarks
										1 Nor.	1 Feed.	
2D.....	12	10	B	Thatcher wheat....	29.4	\$ 51.45	—	36	64	1 Nor.	—	G., I.
				Fortune oats.....	24.5	18.01	—	30	38	1 Feed.	—	
				Montcalm barley..	48.6	73.63	—	36	52	1 C.W. 6R.	—	
				Dakota flax.....	—	—	—	24	—	—	—	

Dakota destroyed by hail. Fortune damaged badly by birds.

WHEAT POOL DISTRICT 13

ALBERT G. WARKENTIN, DUNDURN												
2B.....	13	3	C	Thatcher wheat....	11.3	\$ 19.44	109	24	61	2 Nor.	—	I.
				Fortune oats.....	30.1	23.33	105	24	37	2 C.W.	—	
				Montcalm barley..	20.7	27.94	109	27	45	2 Feed.	—	
				Dakota Flax.....	4.2	15.43	93	15	52	1 C.W.	—	

BILL PROCYSHEN, BLUCHER												
2B.....	13	4	B	Thatcher wheat....	14.4	\$ 24.48	107	24	57	3 Nor.	—	I.
				Fortune oats.....	26.8	20.77	100	28	36	2 C.W.	—	
				Montcalm barley..	21.4	28.89	104	31	44	2 Feed.	—	
				Dakota flax.....	7.4	27.19	107	—	55	1 C.W.	—	

ALASDAIR C. ROBERTSON, BRADWELL												
2B.....	13	4	C	Thatcher wheat....	6.5	\$ 10.72	—	—	56	4 Nor.	—	I.
				Fortune oats.....	5.6	4.34	—	—	36	2 C.W.	—	
				Montcalm barley..	9.6	12.62	—	—	41	3 Feed.	—	
				Dakota flax.....	—	—	—	—	—	—	—	

Fortune damaged by birds. Dakota destroyed.

KALMAN MEGYESI, BREMEN												
3C.....	13	9	C	Thatcher wheat....	23.5	\$ 39.95	112	29	62	3 Nor.	—	G. I.
				Fortune oats.....	47.1	34.62	103	30	36	1 Feed	—	G. G.
				Montcalm barley..	36.6	54.72	103	31	46	3 C.W. 6R.	—	
				Dakota flax.....	7.4	27.19	127	20	57	1 C.W.	—	

ELMER SCHNEBERGER, REYNAUD												
3B.....	13	10	B	Thatcher wheat....	39.8	\$ 68.46	—	36	62	2 Nor.	—	I.
				Fortune oats.....	79.2	61.38	—	39	39	1 C.W.	—	
				Montcalm barley..	42.9	64.99	—	41	50	2 C.W. 6R.	—	W.S.
				Dakota flax.....	18.5	67.99	—	22	54	1 C.W.	—	

NORBERT J. MAMER, LAKE LENORE

3B.....	13	11	B	Thatcher wheat....	48.5	\$ 84.87	96	47	62	1 Nor.	—	I.
				Fortune oats.....	116.7	90.44	90	48	39	1 C.W.	—	
				Montcalm barley..	79.5	120.44	90	47	50	1 C.W. 6R.	—	
				Dakota flax.....	19.3	70.93	108	31	55	1 C.W.	—	

Tests discarded on account of damage by drought, pests, hail, or other causes.

2B..... 13 2 B Albert F. J. Clavelle, Plunkett.

2B..... 13 5 B Robert S. Svoboda, Cory.

WHEAT POOL DISTRICT 14

GORDON E. AKE, LINTLAW												
3B.....	14	1	B	Thatcher wheat....	26.1	\$ 44.89	102	—	59	2 Nor.	—	I.
				Fortune oats.....	78.6	60.91	108	—	38	1 C.W.	—	
				Montcalm barley..	56.9	86.20	108	—	48	2 C.W. 6R.	—	
				Dakota flax.....	15.2	55.86	110	—	52	1 C.W.	—	

ROBERT C. OBERG, HENDON												
3B.....	14	2	B	Thatcher wheat....	14.5	\$ 24.94	111	30	58	2 Nor.	—	I.
				Fortune oats.....	38.2	29.60	109	29	38	2 C.W.	—	S.G.
				Montcalm barley..	44.5	66.53	110	40	47	3 C.W. 6R.	—	
				Dakota flax.....	5.8	21.31	116	19	53	1 C.W.	—	

MARLENE I. LORENZ, PLEASANTDALE												
4A.....	14	3	B	Thatcher wheat....	30.1	\$ 51.77	103	36	62	2 Nor.	—	I.
				Fortune oats.....	81.0	62.77	103	37	38	2 C.W.	—	S.G.
				Montcalm barley..	64.3	96.13	103	38	47	3 C.W. 6R.	—	
				Dakota flax.....	2.5	9.19	112	16	53	1 C.W.	—	

Dakota badly damaged by birds.

JACK EVANS, LIGHTWOODS												
4A.....	14	4	C	Thatcher wheat....	32.2	\$ 56.35	99	37	61	1 Nor.	—	I.
				Fortune oats.....	75.0	58.12	96	36	38	1 C.W.	—	
				Montcalm barley..	52.6	79.69	100	37	49	2 C.W. 6R.	—	
				Dakota flax.....	13.0	44.77	108	25	57	1 C.W.	—	

Wheat Pool District 14—Continued

Cereal Variety Zone	Dist.	Sub. Dist.	Test Design- nation	Varieties	Yield Bushels per Acre	Cash Value per Acre	Days Seeding to Ripening	Plant Height in Inches	Pounds per Measured Bushel	Commercial Grades	Grading Remarks
NORMAN BERNIER, PERIGORD											
3B.....	14	5	C	Thatcher wheat....	23.6	\$ 41.30	—	—	61	1 Nor.	—
				Fortune oats.....	87.5	65.19	—	—	35	3 C.W.	—
				Montcalm barley..	73.1	110.75	—	—	48	2 C.W. 6R.	—
				Dakota flax.....	10.9	40.06	—	—	53	1 C.W.	—
MURRAY TATLOW, RESOURCE											
3F.....	14	8	C	Thatcher wheat....	36.4	\$ 63.70	91	36	62	1 Nor.	—
				Fortune oats.....	93.4	72.38	88	42	39	2 C.W.	S.G.
				Montcalm barley..	69.8	105.75	88	36	49	2 C.W. 6R.	—
				Dakota flax.....	8.5	31.24	102	18	53	1 C.W.	—
J. LOUIS J. RIOU, ARBORFIELD											
3F.....	14	10	B	Thatcher wheat....	47.6	\$ 81.87	94	44	61	2 Nor.	I.
				Fortune oats.....	118.4	91.76	90	49	40	2 C.W.	S.G.
				Montcalm barley..	97.6	147.86	88	47	50	2 C.W. 6R.	W.S.
				Dakota flax.....	25.6	94.08	99	27	56	1 C.W.	—
MARGARET A. PERKINS, CODETTE											
3F.....	14	11	B	Thatcher wheat....	45.7	\$ 77.69	101	42	59	3 Nor.	D., I.
				Fortune oats.....	113.7	84.71	102	45	36	3 C.W.	G.
				Montcalm barley..	93.6	139.93	99	49	48	3 C.W. 6R.	Dcl. D.
				Dakota flax.....	22.2	80.47	116	24	51	2 C.W.	—

Tests discarded on account of damage by drought, pests, hail, or other causes.

3B..... 14 5 D Clara R. Kenyon, Nobleville.

3B..... 14 9 B Joseph L. Foster, Kinistino.

WHEAT POOL DISTRICT 15

ANN SENG A, MEATH PARK											
3B.....	15	10	B	Thatcher wheat....	42.5	\$ 73.10	105	37	61	2 Nor.	I.
				Fortune oats.....	89.4	69.28	108	41	37	2 C.W.	—
				Montcalm barley..	77.6	117.56	104	46	48	2 C.W. 6R.	—
				Dakota flax.....	7.4	27.19	119	26	57	1 C.W.	—
STANLEY BULGIS, CHOICELAND											
3F.....	15	11	B	Thatcher wheat....	—	—	117	38	—	—	—
				Fortune oats.....	—	—	103	36	—	—	—
				Montcalm barley..	—	—	100	37	—	—	—
				Dakota flax.....	—	—	125	21	—	—	—

No samples received.

Tests discarded on account of damage by drought, pests, hail, or other causes.

3B..... 15 9 B Ubald Gignac, Albertville.

WHEAT POOL DISTRICT 16

RONALD SCHMIDT, RUDDELL											
3G.....	16	1	B	Thatcher wheat....	27.4	\$ 47.13	99	22	61	2 Nor.	I.
				Fortune oats.....	46.6	36.11	95	25	38	2 C.W.	S.G.
				Montcalm barley..	41.0	62.11	95	22	50	1 C.W. 6R.	—
				Dakota flax.....	6.7	24.62	104	18	53	1 C.W.	—
THOMAS K. SIMMONDS, SPEERS											
3B.....	16	2	B	Thatcher wheat....	14.7	\$ 25.28	117	26	61	2 Nor.	I.
				Fortune oats.....	27.1	21.00	108	26	38	1 C.W.	—
				Montcalm barley..	13.3	19.88	115	24	46	3 C.W. 6R.	—
				Dakota flax.....	2.8	10.29	126	19	52	1 C.W.	—
HARRY W. KUFFERT, RABBIT LAKE											
4B.....	16	3	C	Thatcher wheat....	27.4	\$ 46.58	93	26	63	3 Nor.	F.
				Fortune oats.....	60.0	46.50	90	29	38	1 C.W.	—
				Montcalm barley..	42.8	63.99	88	24	46	3 C.W. 6R.	—
				Dakota flax.....	8.4	30.45	107	12	53	2 C.W.	F.
DONALD J. COLLIER, MEOTA											
3E.....	16	4	B	Thatcher wheat....	28.2	\$ 49.35	100	29	62	1 Nor.	—
				Fortune oats.....	59.8	46.34	98	30	38	1 C.W.	—
				Montcalm barley..	46.7	70.75	99	28	49	2 C.W. 6R.	—
				Dakota flax.....	13.4	49.24	126	24	56	1 C.W.	—
JACK B. TOBIN, PAYNTON											
3G.....	16	5	B	Thatcher wheat....	8.1	\$ 14.17	95	15	63	1 Nor.	—
				Fortune oats.....	19.6	15.19	90	21	39	1 C.W.	—
				Montcalm barley..	10.5	15.91	88	16	49	2 C.W. 6R.	—
				Dakota flax.....	—	—	—	—	—	—	—

Dakota destroyed.

Wheat Pool District 16—Continued

Cereal Variety Zone	Dist.	Sub. Dist.	Test Designation	Varieties	Yield Bushels per Acre	Cash Value per Acre	Days Seeding to Ripening	Plant Height in Inches	Pounds per Measured Bushel	Commercial Grades	Grading Remarks
KATHLEEN NOYCE, LLOYDMINSTER											
3E.....	16	6	B	Thatcher wheat.....	17.8	\$ 30.62	106	25	63	2 Nor.	G.
				Fortune oats.....	35.4	25.31	99	27	33	2 Feed	—
				Montcalm barley..	35.1	52.47	107	31	49	3 C.W. 6R.	G.
				Dakota flax.....	5.0	18.37	124	20	53	1 C.W.	—
ARNOLD MUSICH, PARADISE HILL											
4B.....	16	7	B	Thatcher wheat...	38.9	\$ 68.07	—	—	63	1 Nor.	—
				Fortune oats.....	58.1	45.03	—	—	38	1 C.W.	—
				Montcalm barley..	42.0	63.63	—	—	49	2 C.W. 6R.	—
				Dakota flax.....	11.0	40.42	—	—	54	1 C.W.	—
TARAS HAWRYLIW, GLASLYN											
4B.....	16	9	C	Thatcher wheat....	49.6	\$ 85.31	102	39	62	2 Nor.	I.
				Fortune oats.....	99.6	74.20	100	40	37	3 C.W.	G.
				Montcalm barley..	78.4	118.78	101	40	48	2 C.W. 6R.	D.
				Dakota flax.....	15.4	55.82	109	25	54	2 C.W.	G.
GEORGE WILICK, MILDRED											
4B.....	16	10	D	Thatcher wheat....	40.2	\$ 66.33	108	37	62	4 Nor.	F.
				Fortune oats.....	68.8	50.57	106	38	39	1 Feed	Dcl.
				Montcalm barley..	66.7	99.72	101	33	48	3 C.W. 6R.	Dcl.
				Dakota flax.....	12.8	47.04	114	20	57	1 C.W.	—
EUGENE HEESING, GOODSOIL											
3H.....	16	11	C	Thatcher wheat....	24.9	\$ 43.57	102	33	65	1 Nor.	—
				Fortune oats.....	55.4	42.93	98	37	39	1 C.W.	—
				Montcalm barley..	40.3	61.05	94	39	52	1 C.W. 6R.	—
				Dakota flax.....	8.9	32.71	109	26	54	1 C.W.	—
KENNETH C. BACHMAN, COMPASS											
4B.....	16	11	D	Thatcher wheat....	59.5	\$104.12	109	36	64	1 Nor.	—
				Fortune oats.....	118.0	91.45	104	36	40	2 C.W.	S.G.
				Montcalm barley..	59.1	89.54	98	39	51	2 C.W. 6R	W.S.
				Dakota flax.....	19.8	71.77	118	26	56	2 C.W.	G.

Tests discarded on account of damage by drought, pests, hail, or other causes.

- 3E..... 16 8 A Roderick M. Macfarlane, Turtleford.
3G..... 16 10 E James W. & Harvey K. Salisbury, Mullingar.



The test conducted by Elvin Axten, Moosomin

CONCLUSIONS

Extreme conditions of growth during the 1949 crop season resulted in wide variations in field crop production throughout Saskatchewan. In some areas, particularly the southwest, the failure of the crop was complete, while in other districts, yields were unusually good. Over most of the province, moisture reserves were inadequate when seeding commenced. Sustained drought conditions in south western and central areas, together with the ravages of grasshoppers and sawflies, caused early deterioration from which crops never recovered. In the east and northeast, timely rains during the growing period were favorable for crop development. The variation in results is adequately demonstrated in the "Weekly Crop and Weather Report," published September 30th, by Saskatchewan Pool Elevators Limited, which shows estimated average wheat yields for Wheat Pool district 3 (southwest) to be 1.6 bushels per acre while yields in district 14 (northeast) averaged 28.3 bushels. Oat yields in the two areas provided a still more startling comparison, ranging from zero in district 3 to 49.6 bushels per acre in district 14.

Similar results occurred in the variety testing project. While a certain degree of yield variation throughout the province provides ideal conditions for testing the varieties, the variation in 1949 was excessive and resulted in widespread test failures. Practically all tests in the southwest were destroyed in the early stages. Nevertheless, apart from this drastic occurrence, sufficient data were obtained from all other districts to provide accurate and interesting comparisons.

In the wheat tests, the newly developed CT-609 appeared promising. Further tests are required to provide conclusive evidence upon which recommendations can be based, but results of tests during 1949 indicate that CT-609 may prove suitable for use in Saskatchewan, particularly in the black and grey soil zones. Stewart durum again sustained more damage by grasshoppers than any of the bread wheat varieties. While this is undoubtedly due in part to the later ripening characteristics of the variety, it would be advisable to consider the danger of loss in Stewart carefully before the variety is chosen. Saunders again gave inferior results and has not been recommended in Saskatchewan.

In the flax tests, the new Dakota variety produced favorable results. It is now recommended for use in most zones of the province. The early ripening characteristics of Sheyenne are important for some districts and further tests with this variety will undoubtedly be made.

The importance of coarse grains production is further emphasized in Crop Comparison tests carried out during 1949. In addition, the variability of flax yields in different years is illustrated.

This concludes the report of the fifteenth annual variety testing program conducted by the Saskatchewan Wheat Pool. The organization believes that during these fifteen years, test results have given considerable guidance to farmers of the province. The success of each project has been a tribute to the Junior Co-operators who have devoted much time and energy to the supervision of the individual tests. Realizing that without their assistance, the projects could not have been undertaken, the organization wishes to express, once again, its sincere appreciation to every Junior Co-operator who took part in the testing activities during 1949.

ACKNOWLEDGMENTS

The Saskatchewan Wheat Pool wishes to express its appreciation of the valuable assistance given by Dr. J. B. Harrington, Professor of Field Husbandry, University of Saskatchewan, in planning and supervising the variety testing program of 1949. The organization also wishes to thank the following who contributed generously to the success of the work.

Mr. L. H. Shebeski, Associate Professor of Field Husbandry, University of Saskatchewan, Saskatoon.

Dr. E. Y. Spencer, Associate Professor of Chemistry, University of Saskatchewan, Saskatoon.

The Officials of the Dominion Experimental Farm, Brandon, Manitoba.

The Officials of the Dominion Experimental Station, Morden, Manitoba.

The Officials of the Division of Plant Science, University of Manitoba, Winnipeg.

The 325 Junior Co-operators who made the project possible by supervising individual tests throughout the Province.

